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ABSTRACT

Described are the development, implementation, and evaluation of six 3-hour inservice training sessions designed to help five participating teachers improve imagination and creativity in fourth, fifth, and sixth grade students. Content areas for each session are outlined; activities including brainstorming and role playing are reviewed; and techniques for stimulating creative expression in writing, drama, play, art, and listening are detailed. Pre- and posttest scores on the Torrance Tests of Creative Thinking are presented along with observations drawn from classroom visits and teachers' anecdotal records. It is reported that the teachers exhibited an increased awareness of the need for encouraging creative behavior and the students demonstrated increased involvement in the creative aspects of learning. Included in the seven appendixes are the Torrance Tests of Creative Thinking, and a sample teacher log with photographs of children's creative activities. (CL)

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DEVELOPING IMAGINATION AND CREATIVITY IN CHILDREN

by Ira Finkel

Submitted in partial fulfillment of the requirements for
the degree of Doctor of Education, Nova University

Old Westbury Cluster
Dr. John Borum: Cluster Coordinator

Maxi II Practicum
April 25, 1975

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TABLE OF CONTENTS

PAGE

PREFACE . . . . (i)
ABSTRACT. . . . . (iv)
INTRODUCTION. . . . . (v)
GENERAL PERSPECTIVE 1
IDENTIFICATION OF PROBLEM 2
    Diagnosis of Problem 4
OUTLINE OF METHODOLOGY. 5
    Visualization of Stages for Project Development (Flowchart). 7
DESIGN STAGE. 8
    Project Generation and Selection 8
        Hypotheses 10
        Project Premise. 11
        Pilot Project. 13
    Basic Design Inputs. 14
        Project Goal and Objectives. 17
        Project Funding. 21
        Operational Sequence 21
PRODUCTION OF MATERIALS STAGE 23
    Building Preliminary Components. 23
    Overview of Program. 26
    Components of Program. 30
    Use of Program Materials 33
IMPLEMENTATION STAGE. 35

Initiation of Project. 35
Visualization of Process for Project Development (Flowchart). 38
The Inservice Course 39
  Session I. 39
  Session II 44
  Session III. 47
  Session IV 50
  Session V. 54
  Session VI 61
EVALUATION STAGE (ASSESSMENT OF STUDENTS AND PROGRAM). 65
The Torrance Tests of Creative Thinking (TTCT). 65
  Description of TTCT. 65
  Validity and Reliability of TTCT . . . 67
  Administering the TTCT 68
    Administering the Pre-Tests. . . . 69
    Administering the Post-Tests . . . 70
  The Teachers and the TTCT. 71
  Scoring the TTCT 74
Rating Samples of Children's Work in Art and Writing. 74

Selection of Criteria of Creative Performance on Art and Writing Samples. 76
Art and Writing Criteria 76
Rating Scale 78
Assessment of Program Materials. 79
Feedback via Classroom Visits and Meetings 79
Teacher Logs (A Record of Incidents) . 81
MEETING PROJECT OBJECTIVES. 86
RESULTS 97
The Torrance Tests of Creative Thinking 97
Table 1. 101
Table 2. 102
Table 3. 103
Table 4. 104
Table 5. 105
Discussion 106
Difficulties and Limitations of Project. . 107
Implications for Further Study 110
PROCEDURES FOR EFFECTING CHANGE 114
Demonstration and Field Testing. 114

Regional Dissemination. 116
Organizational Dissemination and
Conference Diffusion. 116
Publication 120
Employing the Group as Agents
for Change. 120
Summary Statement Regarding
Change Procedures 121
APPENDIX 122
Section I 125
Footnotes and Bibliography
Section II. 133
Inservice Course and Grant
Section III 148
TTCT, Correspondence Concerning Scoring of the TTCT
Section IV. 201
Table of Random Numbers Used in Selecting TTCT from the Control Group for Scoring
Section V 204
Photographs of Random Samples of Student Drawings from TTCT Form A Figural Pre-Test
Section VI. 208
Criteria and Rating Scores of Judges of Student Art and Written Work
Section VII 214
Sample Teacher Log, Record of Incidents, Photographs of Children Engaged in Creative Work

Section VIII. 244
Components of Program

Section IX. 245
Correspondence and Documents
Concerning Project Dissemination

Section X 263
Letters from Observers of
Maxi II Practicum

PREFACE

The author is grateful to the following people:

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ABSTRACT

The purpose of this practicum was to develop instructional materials and test whether they could improve imagination and creativity in fourth, fifth, and sixth grade elementary school children in conjunction with a teacher training program.

Materials were developed and teachers took part in a series of training sessions. The program was tested through a pilot project in two elementary schools involving five experimental classes and five control classes. A pre-test, post-test control group design was utilized.

Analyses of the results showed that the children in the experimental group made significantly greater gains in creative abilities as measured, when compared to children in the control group.

INTRODUCTION

The first section of this report develops a theoretical base for the project. It discusses the author's interest in the subject of creativity and the need to provide educational experiences that encourage and develop imagination and creativity in children. This part of the report also deals with the process by which the educational problem that needed solution was identified and diagnosed in the Island Trees School District. (There was inadequate provision for children to express themselves creatively.) An outline of the methodology that was employed in carrying out the Maxi II Practicum is provided with a breakdown of the four major stages: Design, Production, Implementation, and Evaluation.

In the next section of the report, the Design Stage is explained. The procedures used in getting the project accepted by administrators in the district are described. Several hypotheses which served as the bases for initiating the project are listed along with the creative abilities that the program would seek to develop in the children. The basic design inputs that were considered important in this stage of the project development are dealt with in this part of the report. This included the funding of the project, the operational planning, the district's instructional priorities, the characteristics of the students, the content of the program, the needs and desires of the community, and the project goal and objectives for the teachers, students, and author. A rationale for the selection and use of the pilot project in the development process is detailed.

Throughout the next section of the report, the ways in which the materials were developed, pretested and designed for use in the project are explained. An overview of the program with its broad use of varied techniques for encouraging imagination and creativity through drama, dance, art, music, and writing, is presented with a description of the components that were developed.

The procedure for implementing the training sessions for the teachers is dealt with in the next section of the report. Each of the six sessions of the inservice course is described and the activities in which the teachers engaged during these meetings are discussed. Here, in these pages, the reader can find how the components of the program were used in conjunction with the course content and the activities that evoke creative expression. Topical outlines are provided for these workshop sessions.

The Evaluation Stage provides a description of how the project was assessed. A description of the Torrance Tests of Creative Thinking is presented along with information describing the validity and reliability of the instrument. The procedure for selecting and rating samples of student work in art and writing is discussed in this section of the report. There is also a description of the process by which the program materials were evaluated through classroom visits and teacher logs.

Several pages are devoted to an explanation of how the objectives of the project were met. A description of the teacher participants is included here.

The results of the project are presented in the section following the Evaluation Stage. Data are arranged in tables and summary statements are included which emphasize what the data strongly indicates.

Some of the project's limitations and difficulties are set forth along with some questions which suggest further investigation.

In the part of the report dealing with the procedures for effecting change, a number of strategies that were implemented for the purpose of local and regional dissemination of the program's innovative aspects are described. A list is provided of educational organizations and agencies that were contacted for this purpose.

The appendices consist of footnotes and a bibliography, supporting documents concerning the grant, inservice course, and scoring of the TTCT, copies of the TTCT, a table of randomly selected numbers used in the selection of the Torrance Tests to be scored from the control group, photographs of samples of student drawings on the TTCT Figural Pre-test, data and information about the teacher ratings of student art and written work, a sample teacher log and record of incidents, components of the program (delivered to Nova University in April, 1975, by the author), documents concerning project dissemination and letters from practicum observers.

GENERAL PERSPECTIVE

In recent years creativity has been a major concern of the author, this interest fostered by my general desire to recognize and provide for individual differences of students in my school district along with an expanding concept of giftedness that I developed in teaching courses on the gifted child for twelve years in the Graduate School of Education at Brooklyn College.

Creativity is a part of the general human heritage, though it frequently is buried, lost or inhibited. We have to seek new ways to uncover and realize it. In general, schools have done little to design curriculum experiences and educational programs that encourage and develop creativity in children. This lack of concern in developing creative abilities is reflected in the kinds of activities and assignments teachers initiate, in the kinds of questions, tests and other evaluative procedures they use, and in the methods of instruction used at all levels, from kindergarten and through Graduate School. Emphasis continues to be placed on the cognitive skills, thus rewarding convergent behavior while discouraging divergent thinking. The fact is that educators often actively employ techniques which prevent children from releasing creative expression.

What compounds this problem is that now, more than ever before, there is a compelling need for schools to turn out people who will be frontier thinkers, who can make discoveries, who can find more adequate solutions to world problems. More than ever before, we need men and women who can adapt and maintain sanity in this age of accelerating change.

Recognizing that educational problems of this nature and their potential solutions vary from region to region, from district to district, from school to school, and even from classroom to classroom, I set about to verify the existence of this problem in the Island Trees School District and then to determine an appropriate procedure for dealing with it. Questions that needed to be asked and alternatives that needed to be explored were identified.

IDENTIFICATION OF THE PROBLEM THAT NEEDED SOLUTION

Cooperative Review Service (CRS)

The Island Trees school system recently took part in

an extensive Cooperative Review which was carried out by a team of officials from the New York State Education Department and the total Island Trees community. Meetings and interviews with teachers, administrators, students and parents, together with examination of the curriculum, revealed strengths and weaknesses of the instructional program as perceived by these groups. Data was gathered at different grade levels over a period of several months. A report was prepared which would provide some direction for improving the district's educational operation.
One section included in the summary report submitted by the New York State Education Department revealed that there was inadequate provision for children to express themselves creatively. Specifically, it referred to a lack of the use of imagination and creative thinking by many children as shown in their classroom performance. It said:

> "Much of the teaching is rigid and too directed, allowing little creativity. Textbooks and workbooks dominate the program. A variety of learning modes

that encourage free expression would be helpful."[1]

The report goes on to recommend that,

> "Students should be encouraged to discover for themselves the avenues of their personal expression. The teachers should try to elicit the maximum individual uniqueness. Students should be encouraged to make expressive use of their own experiences, not treated as empty vessels to be filled with techniques and knowledge. There is an evident need for commitment of the total staff to the improvement of the curriculum in this respect and of the total school environment."[2]

Diagnosis of the Problem

The instructional staff of Island Trees was the source of a great deal of information about this particular problem and about changing emphasis in certain subject areas.

An analysis and interpretation of the information that had been gathered regarding the history and probable causes of the problem was carried out.

This examination revealed that there was often a lack of opportunity for children to employ creative thinking techniques as teacher concern continued to be placed on subject matter content, with rewards given for conformity of student behavior and thought.

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[1] The University of the State of New York, The State Education Department, Cooperative Review Service, Albany, New York. CRS The Instructional Program in Island Trees Public Schools, p. 5.

[2] ibid. p.60

The CRS report provided the necessary focus on the nature of the educational problem as it existed and the corrective measures that should be undertaken.

Outline of Methodology Employed in doing the Maxi II Practicum

In order to deal with the problem, an overall process covering four major stages was developed.

I. Design
II. Production of materials
III. Implementation
IV. Evaluation

The Design stage involved two phases:

A. Project generation and selection
B. Basic design inputs

The Production stage involved four phases:

A. Building preliminary components
B. Overview of the program
C. Components of the program
D. Use of the program

The Implementation stage involved two phases:

A. Initiation of the project: The Program (materials, activities, components)

B. The Inservice Course

The Evaluation stage involved three phases:

A. Torrance Test of Creative Thinking Pre- and Post-Test

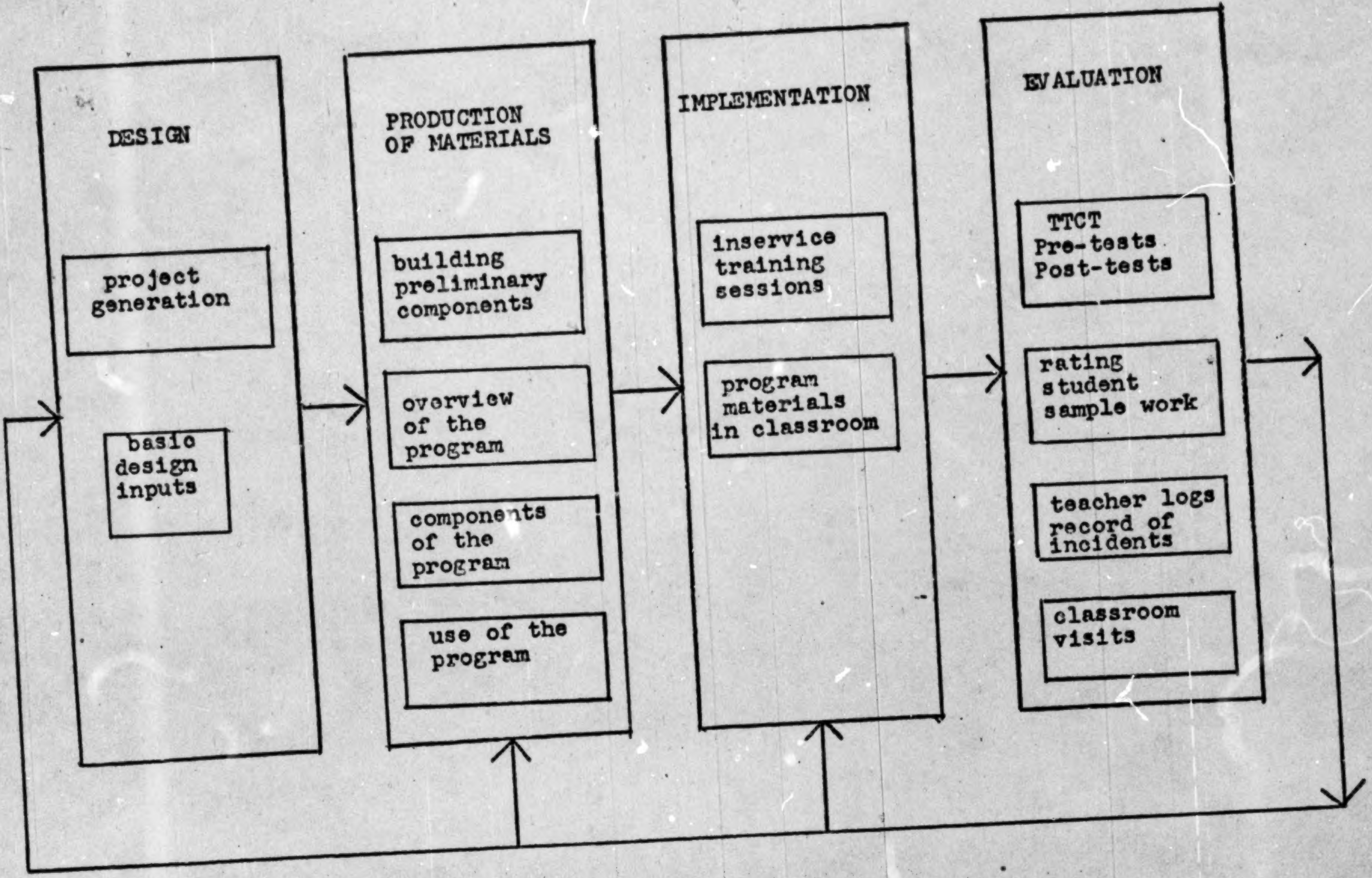
B. Ratings of samples of student work

C. Assessement of Program Materials

   1. Classroom visits

   2. Teacher Logs and Record of Incidents

VISUALIZATION OF STAGES FOR PROJECT DEVELOPMENT


DESIGN
project generation
basic design inputs
PRODUCTION OF MATERIALS
building preliminary components
overview of the program
components of the program
use of the program
IMPLEMENTATION
inservice training sessions
program materials in classroom
EVALUATION
TTCT Pre-tests Post-tests
rating student sample work
teacher logs record of incidents
classroom visits

I. DESIGN STAGE

A. Project Generation and Selection

As District Director of Science Education K-12, I generated and selected the project, identified high priority needs, and recruited the faculty to carry out the project.

In selecting the project, I first made sure that it met the priorities of the school district. These were explored with those responsible for both immediate and long range goals of the schools in which the project would operate. Priorities were established and articulated at meetings with central administration, building principals, and staff.

Political instability in the district made this part of the task extremely difficult. The fact that the district employed four different men in the position of "Superintendent of Schools" within a one period of time made for poor continuity even in securing agreement of the need for change. I recognized that the internal conditions of administrative instability would make it extremely difficult to begin a new, long term instructional development project.

In this climate, a decision about curriculum design made one day, no matter how valid, could be overruled in the next. To reduce the possibility of project abandonment, I maintained a steady dialogue with central administration about the potential significance of this project in relation to instructional improvement within the district.

I met with each superintendent shortly after his appointment and successfully obtained written commitment to support the project, which avoided the possibility of sudden project cancellation by administrative fiat. In part, the securing of a N.Y. State Education Department project grant enabled me to gain and continue this approval.

I checked the existing administrative time frame and found that for political reasons "immediate results" would be required. Operating under this constraint, it became necessary to expedite development.

In the process of making the scope of the task manageable, I determined the consequences of several tentative solutions, since it was inconceivable to think there could be only one proper solution and not to consider alternatives. I chose a method that could be subjected to scrutiny based on its actual use. With full knowledge of the risks involved, I chose the short pilot project as the best solution.

A point of entry to the problem was determined (developing new instructional materials and training teachers) prior to the initiation of the project.

1. Hypotheses:

The project "Developing Imagination and Creativity in Children" (The Care and Feeding of Creativity in Children - An Inservice Course for Educators), was based on a series of hypotheses:

a. That imagination and creativity in children can be nurtured and developed

b. That traditional curriculum and course structures, which generally reflect an emphasis on cognition and convergent behavior, can be linked to strategies and techniques designed to release creative expression

c. That teachers' efforts can be directed to produce classroom environments that by design will encourage the release of imagination and creative expression

d. That improvements in curriculum and instruction will not take place unless stimuli for change are provided and unless effective procedures for change are designed and implemented

2. Project Premise

The program was designed and built upon the creative potentialities that exist within children. Those potentialities include the ability to express feelings and emotions imaginatively in many ways, including the use of one or more of the following vehicles: drawing, painting, puppetry, creative movement, expressiveness of gestures through body. language, dance, dramatics, pantomime, role playing in simulated situations, music, rhythm, creative writing, poetry, imagery in language, and expressiveness in speech. Teachers trained to use a wide variety of approaches, strategies, and techniques should be able to stimulate creative expression in their children.

Both test and non-test procedures would be utilized to recognize creative behavior, creative thinking abilities and creative potential in the children. Because they have been used widely in other studies involving elementary school children and permit a reasonable degree of standardization and objective scoring, the Torrance Tests of Creative Thinking (TTCT) were selected as a satisfactory instrument for use in this study.

While the program was to be measured in a traditional manner by utilizing the Torrance Tests of Creative Thinking through a Pre-Test -- Post-Test Control Group Design, it would also require a great deal of sensitive observation and evaluation in a classroom setting that would provide the children with opportunities for creative thinking and expression. Four major abilities involved in the creative process would be sought:

a. fluency - producing as many ideas as possible
b. flexibility - shifting to a new frame of reference or to a variety of approaches or categories
c. originality - producing unusual or uncommon ideas, getting away from the obvious
d. elaboration - working out the details of an idea

3. The Pilot Project

The pilot project, employing six weeks for inservice training of teachers and four months for classroom implementation, was chosen because it would yield results quickly and save money by identifying efficient procedures while training selected faculty members to work in the new program.

The project was limited to five experimental classes and five control classes which included representative activities from the prepared areas of the program. The size of the experimental group, 110 students, was chosen because it would not prevent certain alternatives from being tried, nor would it produce logistical problems. It would also be an excellent investment for a district with severe budgetary problems in that it would not increase the cost of the field test by requiring many more sets of instructional and testing materials than would otherwise be required.

The use of the pilot project in the development process would also do the following:

a. Test the adequacy of the design and the instructional strategies used, and provide relatively fast feedback on the appropriateness of all aspects of the project -- objectives, instructional strategies, content -- for the target population of students

b. Permit training for members of the teaching staff and provide a test for remaining faculty, convincing them whether the outcome would be worth the effort and whether to become involved

c. Permit long term economies by identifying those approaches most likely to succeed

B. Basic Design Inputs

Seven basic inputs were considered after the decision was made to begin the project. They were: (1) the characteristics of the students, (2) the desires and needs of the community, (3) the instructional priorities of the district, (4) content that would be appropriate to the scope of the project, (5) the project goal and objectives, (6) the funding of the project, and (7) operational sequence.

1. Characteristics of the students were obtained through informal and formal discussions with teachers who were knowledgeable about their skills, competencies, backgrounds, interests, and needs. It was learned that many of the children, insofar as creativity was concerned, had characteristics which differed markedly from one another.

Some possessed characteristics which would support creative behavior. They were reported to be emotionally sensitive, independent in spirit, receptive to new ideas, courageous, and willing to risk failure and try out something new. Others were reported to have questionable and even detrimental characteristics that placed too much emphasis on conformity. They were willing to accept judgments of authorities on mere say-so without evidence. Apparently they were motivated by other needs to be obedient, popular, and well liked. This information proved to be important in designing and selecting components of the program. It was used to develop materials for specific children.

2. The general needs of the community were considered when basic priorities for the project were established.

Once again I turned to the Cooperative Review Report. As part of the Cooperative Review Service, 947 parent appraisal forms had been distributed. In the first section of the appraisal form, parents were asked to state what they considered to be desirable educational practices. A considerable number of parents indicated that in general they wanted the schools to enrich their children's educational experiences through more use of special programs that would recognize creative abilities and meet individual needs.

At this point, I sought to identify specific needs of the community. Through discussions with PTA members and residents on various Board of Education committees I gathered additional information about the particular competencies and skills that parents wanted their children to learn. What seemed to be central among generalized skills was the capability for problem solving, which involved competencies conducive to creative thinking.

3. It was seen that the instructional priorities of the district, shaped by monetary and material constraints, would make the support of a long term, multi-faceted program economically unsound. Interaction among groups of people involved was developed in order to spell out, whenever possible, measurable and clearly defined goals, to make optimal use of resources and to allow evaluation, feedback and modification of the procedure. It was determined, by examination of established district objectives and discussions with administrators and staff, that the objective of the program was consonant with the instructional priorities of the system.

4. A meeting with participating members of the instructional staff was arranged to insure that the content and scope of the program would be academically sound and that a continuing process for updating material would be included in the overall design.

5. I explained the goal of the project and, together with the teachers, determined the objectives for myself, the teachers and the students. The teachers and I agreed in advance on the approaches that would be used over the extended period of time to assess the project. Time and conditions of assessment were arranged to the mutual satisfaction of the participants and myself.

a. Project Goal

To improve and develop imagination and creativity in children of fourth, fifth, and sixth grades by documenting gains in ability to be flexible, fluent, original, and elaborative.

b. Objectives

Objectives of the program were delineated for myself and also for the teacher participants and the children.

(i) As project innovator I would:

(a) diagnose needs of the participants

involved in the training program and prescribe appropriate activities

(b) establish a relationship with the five participating teachers in order to support them as they began to assume personal responsibility for their own growth in skills and techniques of instruction

(c) select and/or create appropriate sequences or combinations of individual effort and arrange small group meetings that would contribute effectively to the personal development of all concerned

(d) help the five teachers develop and plan sequences of training experiences associated with the maintenance and growth of skills and techniques of instruction that facilitate expression of creative abilities and imagination

(e) plan my inservice course to conform with the total district planning process

(f) coordinate the dissemination of effective improvements that might result from this project

(ii) As a participant each teacher would:

(a) initiate activities and experiences described in this program with the students

(b) draw upon literature and research in the theory and practice of creativity as provided by the tapes and guides which provide support for implementation in the classroom

(c) apply knowledge of the theory and practice of creative behavior to those classroom activities determined to be relevant to the development of creative expression and imagination in students

(d) establish a classroom environment conducive to imaginative thinking and creative expression:

welcoming children's inquisitiveness;

encouraging children to raise questions and offer divergent opinions and responses;

reinforcing children's behavior which shows inventiveness, originality or insight; recognizing the value of every child's contribution and promoting this same recognition within the children for the contributions of their fellows.

(iii) As subjects of the experiment the children would:

(a) express their feelings verbally (orally and in writing) and non-verbally (through dance, art, games, and dramatics)

(b) create characters, action and dialogue from stories, pictures, experiences or their own imaginations

(c) describe ways of making toys more fun to play with

(d) record and describe sensory impressions

(e) dance and move to music and poems read aloud

6. During the spring of 1974, I submitted a grant proposal through the Nassau Board of Cooperative Educational Services (BOCES) to the N.Y. State Education Department, seeking financial support for the project. The decision makers within the State Education Department and Nassau BOCES saw promise in the proposal to develop a broad program to train teachers to develop imagination and creative expression in their children through art, drama, music, dance, and creative writing. (See Appendix Section II)

In June, 1974, I received notice that this grant proposal was approved and that the pilot project would be fully funded and receive the maximum amount of money ($3,000) allotted through the N.Y. State Education Department Mini Project Grant System. Decision makers within the Island Trees School District also indicated that if the virtue of the program could be demonstrated it would gain their support and a commitment to implement it in schools within the district.

7. I took the instructional sequence and placed it into an operational format modified to meet the practical limitations of the system in which it would exist. In this phase each instructional component was identified:

each training session, each group meeting during the implementation stage, the schedule for pre-testing and post-testing, the method for keeping records of student involvement and the method for collecting student work samples. The entire combination was placed in a realistic time frame. Modification would continue during the entire development and implementation process, but changes beyond this point were anticipated to be minor.

Planning at this stage took into consideration the facilities (space and hours of availability for teacher instruction, classroom space for students, and capabilities for visual presentations). It was also noted that the number of activities in the project would depend to a large extent upon the amount of time available for development of instructional materials. The time available was a limiting factor, but in order not to reduce the scope of the project, I worked eight weeks during the summer of 1974 to continue production of the instructional materials. The $3,000 project grant helped to pay salaries and cover costs of materials.

II. PRODUCTION OF MATERIALS STAGE

A. Building Preliminary Components

In addition to being full-time District Director of Science Education in Island Trees, I have taught part time for twelve years in the Graduate School of Education in Brooklyn College. Preparation of the materials was begun here during the early spring of 1974.

I was able to pretest many of the instructional components of the program in late spring of the same year by having teachers in "Education of the Gifted Child," my graduate course at Brooklyn College, test them out in their own classrooms. I visited elementary classes in public schools in Brooklyn to observe children using prototype materials of the program. I discussed with the teachers their reports on the involvement of the children, and problems encountered with certain materials. Based on this feedback, construction of components of the program, which then would be placed in the instructional sequence for meeting the goals of the project, was carried out. Research, planning and construction of materials continued throughout the summer of 1974.

The completed materials were given to teachers of the Island Trees district during the inservice training stage and the implementation stage of the project in the autumn of 1974. The program maintained its flexibility in that some components were redeveloped to accommodate various viewpoints expressed by the teachers during weekly meetings. These meetings provided rapid communication and helped to identify gaps, overlaps, and sequencing problems in the program. Modifications in the program were then made to meet these specific administrative, material, and human constraints.

In order to take advantage of already available material the resources of public and college libraries and commercially available programs were examined for possible use in this project. Most of the materials were considered inappropriate because of the special needs of the teachers and children involved in the project. Audio-visual materials to be used in the instructional components were therefore created for this specific project except for the use of 44 slides from Alex Osborn's "The Golden Key to Problem Solving." A bibliography was detailed in the written guides for the teachers. It included sources of information about techniques designed to stimulate creative expression through dance, drama, writing, art, and music. (See Appendix Section I)

There was also a dollar constraint within which the program had to operate. Development and implementation were geared to the total funds made available through the N.Y. State Education Department. This was the sole financial support of the project with the exception that the Island Trees School District funded the inservice training course.

While there was some flexibility in the use of monies, because the funding support came from an outside source, there were specific limitations as to how much could be spent in each area: salaries, materials, and equipment.

Many hours of research helped to determine which approaches and techniques might work and which would not. In order to learn from the experiences of others, to find out what had been tried and what had happened, I searched the literature on the subject of educational programs designed to nurture creative behavior and the environmental conditions that might affect creativity. For a review of titles consulted the reader should refer to the bibliography in Appendix Section I. Three types of particularly relevant papers were found in the literature:

(1) Studies evaluating programs designed to nurture

creative behavior, (2) Studies of environmental variables affecting creativity, and (3) Studies of factors that inhibit creative thinking.

B. Overview of the Program

This program was planned to provide educators with the requisite knowledge and skills to enlarge their understanding of the nature of creativity and enhance, encourage and enrich their use of instructional strategies to facilitate creative behavior in their students.

The focus of the activities was on encouraging children to act with imagination, which is a springboard for creativity. Specifically, for teachers, the program contained audio-visual materials and written guides presenting techniques and ideas for developing imagination in students through the use of creative dramatics, body movement; pantomime, art, writing, sensory awareness exercises, brainstorming, and role playing. A wide variety of activities was included because educators cannot predict which types of tasks will most encourage and develop a child's creative functioning. Some individuals respond creatively to things that they hear, while others rise to greater heights in response when given visual stimuli. Some children are free, spontaneous and bold in their thinking when permitted to express their ideas in non-verbal forms, but become paralyzed and impoverished when asked to express their ideas in words. For others, the reverse is true.

This program involved 110 children in the production of unusual or uncommon ideas, in the elaboration of these ideas, and in shifting approaches to tasks. Research indicates that these kinds of thinking are analagous to the types of mental activity involved in recognized creative achievement. Although creative thinking may manifest itself in other forms, some of the most important achievements resulting from the creative thinking process have been produced using these forms.

Research evidence strongly indicates a decrement in creative functioning beginning at the fourth grade level. (Paul Torrance, after studying thousands of children, concluded that creative thinking skills generally reach one peak of development at about 4½ years of age. There is a drop at five when a child enters kindergarten, followed by a steady gain over the next three years. Then, near the end of the third grade or the beginning of the fourth, at age nine, youthful creativity drops sharply.)[3]

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[3] E.P. Torrance, Guiding Creative Talent, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1962, p.91.

I did not accept this pattern as an inevitable part of the growing up process but took a different view. This program was predicated on the belief that children lose spontaneity, originality, and curiosity because emphasis is placed on their cognitive learning at the expense of the development of imagination. Hence, in this program, teachers participated in a series of six training sessions lasting three hours each. These sessions involved them in learning techniques to develop imagination. They examined, analyzed, and discussed aspects of the creative process:

1. Stages in creativity, (emotional components and psychological processes of creative behavior)
2. Different types of creativity
3. Blocks to creative expression (removing hindrances to creativity; significant instructional implications)
4. Identification of creative potential in children (analyzing and using different tests of creativity)
5. Techniques of developing questioning skills designed to elicit creative responses and divergent thinking

6. Classroom situations conducive to producing an environment that fosters creativity

A series of workshop experiences for the teachers demonstrated a wide variety of classroom techniques designed to:

(a) develop and encourage divergency in thinking

(b) develop, stimulate, and encourage imagination as a springboard for creativity

(c) break the "cognitive learning mind set" and make it possible for new ideas to emerge

(d) expand awareness of sensory stimuli

(e) promote fluency, flexibility and originality

The use of brainstorming, synectics, role playing, and simulations with their implications for instructional approaches designed to foster creativity were examined in the workshop sessions.

The components of this program were adaptable to different modes of instruction. They were learned by the teachers in large groups, small groups, and individually. In this way, the program was designed with much flexibility for teacher use.

Upon classroom implementation of the strategies and techniques, students became involved in a wide variety of learning experiences designed to stimulate creative expression.

C. Components Of The Program

1. Written Guides for the Teacher with Photographs - suggestions, ideas and techniques are spelled out in guides that are coded for each separate section.
    a. Creative writing (ideas for developing creative writing ability; suggestions for children who have special problems)
    b. Creative Dramatics and Creative Body Movement (ideas for use of drama and dance)
    c. Creative Play (toys and games specially chosen to stimulate creative behavior)
    d. Creative Art (ideas to promote originality and stimulate imagination and creative expression)
    e. Creative Listening (ideas for the use of music and sound effects to stimulate creative expression in various forms, including writing, art, and body movement)

The Guides provide a comprehensive bibliography for each section along with some samples of student work and a series of photographs of the work of the children who were involved in these creative activities.

2. Slide Presentation and Slide-Talk. Eighty 35 mm. color slides in a Kodak Carousel are packaged together with written slide-talk on "The Care and Feeding of Imagination and Creativity in Children." This audio-visual presentation is designed for the orientation of the teachers who participate in the training sessions on the development of imagination and creativity in children. The visuals consist of slides of original art work done by Island Trees students and photographs taken for this program.

3. Slide Presentation and Slide-Talk. Sixty 35 mm. color slides in a Kodak Carousel, together with a written slide-talk, have been designed for the teachers to use with the children. These slides create "Just Suppose" situations where the children are asked to imagine that they are the animals seen on the slides. They are asked to respond to a series of questions that ask them to transform themselves into something that they are not and to take trips into new situations through use of their imaginations. A series of "Strange Happenings" slides has been designed to foster imaginative thinking by asking the children to give imaginative explanations of the strange events pictured in the slides.

4. Video Tape. Children participating in a series of sensory awareness exercises and pantomime were filmed in a public school in Brooklyn, N. Y.

5. Movie. Fifth grade children are shown participating in a series of short creative dramatics skits that involve them in pantomime. (Written and filmed by the students.)

6. Movie. Fifth grade children created this film using their own imaginations and ingenuity utilizing single frame action of the camera. (Entirely created by the children in a public school in Brooklyn, N.Y.)

7. Cassettes. Eleven audio tape cassettes are available for teacher listening. The areas that the tapes deal with are:

Creative Writing (2 cassettes) - ideas and comments;
Toys, Games and Play (1 cassette) - ideas and lessons;
Creative Art (1 cassette) - ideas and lessons;
Creative Music (1 cassette) - ideas and lessons;
Music for Therapy (1 cassette) - therapy session;
Creative Drama (1 cassette) - comments and ideas;
Role Playing and Brainstorming (1 cassette);
Creative Drama Book Reviews (2 cassettes);
Simulations and Drama Workshop (1 cassette) - exercises.

8. Slide Presentation and Talk. Ten 35 mm. slides are included with a written slide-talk explaining how to create "art-slides." (One of the activities stimulated by the program had the children etch forms in acetate, mount the acetate in cardboard two-inch square frames, and project them as art slides. The children are shown in the process of creating slides, step by step. The program ends with thirteen art-slides created by a group of second grade children.)

D. Use Of The Program Materials

This program was designed to throw some light on a phenomenon of human behavior that is as old as recorded history: creativity and imagination.

It asks teachers not to remain detached from the process, even as interested learners, but to become involved as participants in finding a mechanism or key by which to release imagination and the undiscovered human potential of children as well as discover the real meaning and essence of the individual.

"Come, enter with me in my imagination." With this command Cervantes calls forth Don Quixote in "Man of LaMancha." Similarly, this program calls teachers to become involved in activities that recognize the unique worth and value of each child, that focus on ways to encourage, stimulate and release imagination and creativity, and that seek to discover and bring about the emergence of human resources that might otherwise remain unrealized.

The program was designed for use in several ways:

1. A single teacher may use the material alone in a self tutorial manner in conjunction with the training course.
2. Two or more teachers in a team learning circle may use the tapes, guides and pictures in discussing the material and enlarging upon ideas presented in the training course.
3. A large group of teachers either in Seminars or Inservice Training Sessions may use the series and actively engage in practiced activities to release their own imaginations.

In this project, the program was viewed, listened to, read and studied section by section by each participant and utilized as the major part of the series of training sessions. It was not treated apart from the school curriculum. Instead, it was used to complement the regular course of study. Participants received instruction and guidance in integrating the program with language arts, social studies, mathematics, science, music and art.

III. IMPLEMENTATION STAGE

A. Initiation of Project

The program was introduced in the Island Trees School District as a pilot project during the school year 1974-75. The vehicle that I selected as most practical and useful for training teacher participants was a six week inservice program consisting of six three-hour workshops demonstrating planned approaches to creative thinking and creative expressive activities.

1. Procedure

In early September, I advertised to the elementary teachers of the district that I would be offering an inservice course on the development of imagination and creativity in students. Notices were drafted and distributed to all four elementary schools within the district. Thirteen elementary teachers chose to enter the course with one dropping out before the first session began. Of the twelve remaining teachers, I selected five from grades four, five, and six, and they agreed to be part of this project; one from grade four, three from grade five and one from grade six. I was the leader for each of the six three-hour workshops. My preparation for this task was based on the twelve years of teaching experience in the

Graduate School of Education at Brooklyn College, during which time I instructed graduate students in the disciplined approaches to imaginative thinking and creative problem solving.

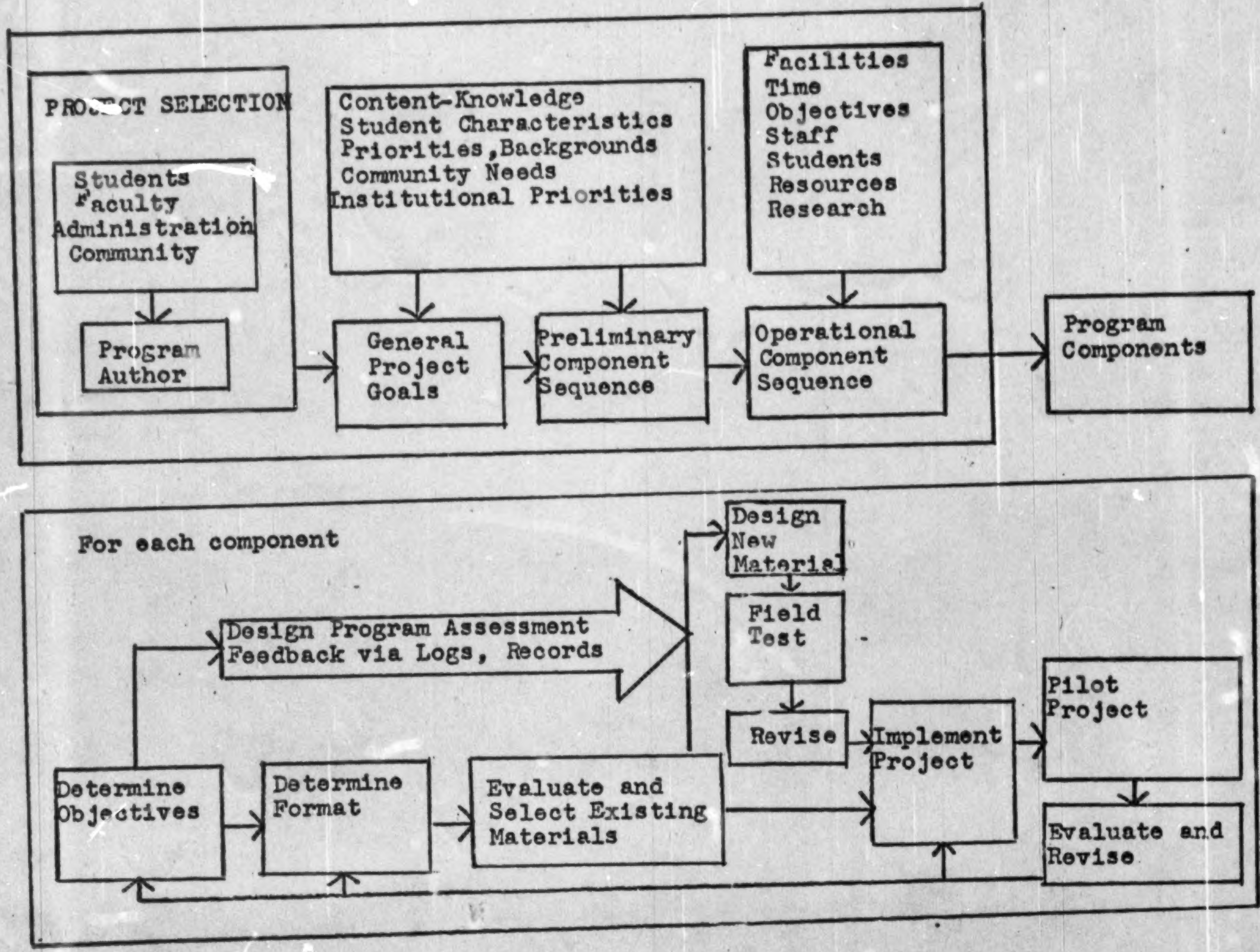
The workshops were held in Island Trees High School for six consecutive tuesdays starting in September and ending in October. Each day's session lasted from 2:30 p.m. to 5:30 p.m. The classroom provided was large and permitted movement by the participants from large groups to small groups or to individual activities. Program materials that had been developed by the author prior to the implementation of the training sessions were distributed at the beginning of each session. These were taken home for use by the participants during the week and provided a basis for discussion and activities during the following training session.

The strengths of the teachers available for participation in the program determined further revision of the instructional materials. For example, when it was learned that specific areas of expertise were missing, I designed and developed pre-packaged, self-contained instructional components such as cassettes to be used independently by the teachers at home and/or in school.

The students themselves became a major factor in the overall project design. Activities and experiences built into the instructional materials were modified, based on strengths and weaknesses of individual students who were identified by the teachers. As a result, special activities were developed to accommodate certain students (e.g.: program materials were developed for children with learning disabilities) and to allow for certain areas of special interest.

Among faculty members who had not elected to take the inservice course, eight teachers volunteered to be part of the control group. I selected five teachers from grades four, five, and six, and they agreed to be the control group in this project. Two participants were from grade four, two from grade five, and one from grade six. This group had no access to the ideas, strategies, techniques or materials provided in the early training sessions and, later, during the implementation and evaluative stages of the project. They received no direction or assistance from any of the participants for the duration of the project.

VISUALIZATION OF PROCESS FOR PROJECT DEVELOPMENT


PROJECT SELECTION
Students
Faculty
Administration
Community
Program Author
Content-Knowledge
Student Characteristics
Priorities, Backgrounds
Community Needs
Institutional Priorities
General Project Goals
Preliminary Component Sequence
Facilities
Time
Objectives
Staff
Students
Resources
Research
Operational Component Sequence
Program Components
For each component
Design Program Assessment Feedback via Logs, Records
Design New Material
Field Test
Revise
Determine Objectives
Determine Format
Evaluate and Select Existing Materials
Implement Project
Pilot Project
Evaluate and Revise

B. The Inservice Course

A description of the content and activities in each training session is provided in outline form.

Session I

A general discussion was held regarding the need for creativity, ways people work creatively, and impediments to the creative process.

Topical Outline

1. Encouraging people to think creatively and make new discoveries, to find more adequate solutions to world problems, and to be receptive to change and maintain sanity in this age of accelerating change
2. Efforts calculated to produce critical, creative, independent, and analytical thinking
3. Creativity as an important asset in coping with life's daily stresses
4. Learning creatively (a) through questioning, inquiring, experimenting, manipulating or playing with ideas and materials; (b) through the use of mental abilities such as fluency or the ability to think

of a large number of ideas or multiple solutions to a problem; (c) through flexibility or ability to think of unusual possibilities, to get off the beaten track, to be original or to produce something new, and elaborate it; (d) through the ability to work out details of an idea and implement it.

5. Creativity as it involves the ability to produce new forms, joining elements that are customarily thought of as independent or dissimilar.

6. Components which make up creativity:
    a. sensitivity to problems
    b. fluency of ideas and associations
    c. flexibility
    d. originality
    e. redefinition, or the ability to rearrange
    f. analysis or the ability to abstract
    g. elaboration
    h. synthesis and closure
    i. coherence of parts
    j. evaluation

7. Differentiating between various levels of creativity:[4]
   a. expressive creativity: independent expression in which skills, originality, and quality are relatively unimportant
   b. productive creativity: production of a product through mastery over some portion of the environment
   c. inventive creativity: ingenuity in seeking new uses for old parts
   d. innovative creativity: a significant alteration in the basic foundations or principles of a theory
   e. emergent creativity: ability to absorb the experiences which are commonly provided and from this produce something new.

8. Creativity viewed as a composite of many processes, with participants examining sample assessments of some of the measures designed to explore an individual's ability to think of:
   a. alternate uses for objects
   b. consequences of new or unusual situations

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[4] I.A. Taylor, "The Nature of the Creative Process," _Creativity_, P. Smith, ed., Hastings House, 1959, pp. 51-82.

c. sentences, when given the beginning letters of words

d. words of similar meaning to a given word

e. figures or pictures which may be developed from a mark or line

f. ways of elaborating upon details or pictures

g. new patterns created by removing parts of a given pattern

9. Recognition that stifling the creative impulse cuts at the very roots of satisfaction in living and creates paralyzing tension

   a. forces at work in our society that block and limit creativity by today's standardizing life styles and using group methods for problem solving

      (i) rigidity of an industrial-technological system (need to do as others do)

      (ii) sheer complexity of the world to which adjustment has to be made

      (iii) fears that obstruct the freedom of teaching and of learning

(iv) overcontrol by parents and teachers (the adult system of approvals and disapprovals of children's behavior)

  (a) attempts to eliminate fantasy
  (b) restrictions on curiosity
  (c) overemphasis or misplaced emphasis on sex roles
  (d) emphasis on prevention, fear, and timidity
  (e) misplaced emphasis on verbal skills
  (f) destructive criticism
  (g) coercive pressure

This session ended with the presentation of a specially produced slide program and slide-talk (80 slides) that introduced the participants to the major theme of the packaged program. These slides were prepared from original art work done by Island Trees students and from original photographs taken for the purpose of the program. The slides and talk centered on special ways to spur on the imagination of children so that it can propel the creative spirit into creative activity.

Directions for administering the Torrance Tests of Creative Thinking:

The five participants who were part of the experimental study group remained after the training session ended and each received a Directions Manual for the Verbal and Figural Tests (Form A) with all information necessary to administer the tests. A discussion was held about the content of the tests and what they are designed to measure. Specific instructions for administering the test activities were given. Directions were given to maintain uniformity of administration.

Session II

Session II began with an experiment in creativity. Upon entering the room each participant was given a sheet of five instructions:

EXPERIMENT IN CREATIVITY

1 - TAKE A SEAT AS YOU ENTER THE ROOM

2 - DO NOT LEAVE YOUR SEAT FOR THE DURATION OF THIS EXPERIMENT

3 - ADD SOMETHING TO THE ENVIRONMENT

4 - WRITE OR DRAW SOMETHING ON THE PAPERS ON THE WALLS

5 - ABOVE ALL BE CREATIVE AND FOLLOW DIRECTIONS

Paints, and crayons were distributed throughout the classroom and sheets of art paper hung on the walls. The paradoxical situation produced by the conflicting instructions, which served to inhibit the participants' behavior, was discussed and analyzed. Its relationship to the real class environment was then probed and this subsequently led to an introduction to the "creative classroom" and the "creative teacher."

Topical Outline

1. Reinforcing the classroom climate where free expression, choice, and spontaneity are encouraged and where the individual child can come to rely on his own senses. The paper "Creativity and Conformity in Education" by Clark Moustakas from Essays Towards a Humanistic Psychology and The Authentic Teacher (1966) served as a basis for this discussion. While analyzing conditions which promote creativity in the classroom the following tactics were identified and discussed:

    a. stressing the divergent thinking process
    b. utilizing open situations
    c. encouraging children to face the unknown

d. motivating students to generate and develop their own ideas

e. promoting the habit of working out the full implications of ideas

f. manipulating objects and ideas

g. teaching children to value their own creative thinking

h. dealing with peer sanctions

i. making resources available

j. creating "thorns in the flesh"

k. developing sensitivity to environment stimuli

l. asking questions which elicit unique or original responses

Suggestions and guides were distributed to the teachers who were required to prepare twenty-five questions which would tend to stimulate imaginative responses and divergent thinking. Five of the questions had to be linked to language arts, five to social studies, five to science, five to mathematics and five either to music or art. The content level of questions had to be geared to the children in their respective classes. A discussion of various questions they had developed closed the session.

Cassettes and printed guides dealing with techniques, strategies, and ideas for creative art were distributed to the participants for use at home and/or in school during the week.

Session III

Creative Expression Through Art: This session began with a review of the principles and procedures discussed in the cassettes and guides studied during the week.

Topical Outline

1. Discussion of different types of motivation that stimulate children to artistic expression
    a. music
    b. stories
    c. plays
    d. experiences
2. Exploration of art experiences that allow children to think for themselves, to experiment and to explore
3. Examination of creative art as both a product and a process
    a. a product of the combinations of a child's inner and outer experiences (an integration

of inner feelings and outer experiences that produces an end product as an expression of physical reality)

b. a process in which physical, intellectual, and emotional activity come into play when a child manipulates art materials.

4. Expression and freedom to use a variety of media
   - a. fingerpainting
   - b. creating paper bag puppets
   - c. easel painting
   - d. mask making
   - e. mural painting
   - f. creating stick puppets
   - g. modeling clay, soap, fruit, wood, plaster of paris, papier-mache
   - h. chalk and crayon drawing
   - i. making ink-blown designs
   - j. designing collages
   - k. constructing dioramas
   - l. paper and wool weaving
   - m. making and using marionettes
   - n. creating movies or film strips of favorite books

o. re-creating scenes from a field trip

p. illustrating a musical piece

q. constructing scenery for a play

r. working with ceramics

s. building mobiles

t. working in wire forms

u. making box constructions

5. Extensive discussion of the ideas, strategies, and techniques presented on the cassettes (demonstrations of techniques along with instruction relating to the activities on the cassettes and in the guides) was an integral part of the session. Teachers participated in workshop activities in finger-painting, paper bag and stick puppet construction, collage and diorama construction, chalk and crayon drawing and mask making

Cassettes and printed guides dealing with techniques, strategies and ideas on the use of music, toys, games, and play in stimulating creative expression were distributed to the participants for use at home and/or in school during the week.

Session IV

Creative Expression Through Music and Play: This session began with a review of the principles and procedures discussed in the cassettes and guides studied during the week.

Topical Outline

1. Different types of motivation that stimulate children to enjoy and delight in the sounds of music
    a. thoughtful listening
    b. singing
    c. playing instruments
    d. rhythmic movement or dancing
    e. dramatizations of program music
    f. creating words, poems, and pictures to fit the moods in music
    g. painting or designing to the mood, rhythm, or form of music

    Appropriate sources (records and books) for the above were discussed

2. Music as a vehicle for relieving tensions
    a. participants listened to a thirty minute music therapy session recorded in the long-term care ward of Elmont City Hospital,

N.Y.C. The techniques used by the musical therapist to involve patients emotionally and physically in the music experience were examined and discussed

3. Creative activities set to music
   a. participants worked individually and in small groups writing poetry, painting, and dancing while listening to music by Tchaikowsky and Gershwin.
   b. at the conclusion of the activities the teachers were asked to talk about their experiences and to examine and analyze the mental, aesthetic, and emotional expressions that were released

4. The Role of Play in the Child's Life:
   The importance of play was discussed
   a. as an act of creation - the child creating himself
   b. as a means of self-expression
   c. as a means of learning about the world
   d. as a means of physical and emotional development in the child

    e. as a means of mastering anxieties
    f. as a means of dealing with forbidden wishes
    g. as a means of practicing adult roles
    h. as a means of learning cooperation and compromise

The views of Eric Erikson and Jean Piaget regarding the purpose of imaginative play were examined. These two psychologists were mentioned in the slide-talk program viewed during the first inservice session. Various games to stimulate imagination and involve students in divergent thinking were identified and described. Participants took part in a number of games that could be used in the classroom. The set of imagination games from Richard de Mille's book "Put Your Mother on the Ceiling" were practiced.

5. The use of toys designed to inspire active play and stimulate imagination was explored by the group. The participants focused on the question: "What is a good toy?" and defined the following parameters:

A good toy

a. affords challenge
b. lends itself to more than one use
c. is safe, sturdy, and well-constructed
d. fits human needs and does not confine a child to rigid sex stereotypes of masculinity and femininity
e. is adapted to the child's age, developmental needs and personality

The types of play materials that would involve children in elaborate, imaginative play were identified.

6. Constraints to imaginative play were discussed

a. the influence of adult stereotypes
b. copying and demonstration
c. adult criticism and praise
d. the affect of the imposition of adult standards of realism

Through the teacher guides and cassettes, participants were referred to additional games and other play activities. Cassettes and printed guides dealing with techniques, strategies, and ideas on body movement, creative dance, and creative dramatics were distributed to the participants for use at home and/or school during the week.

Session V

Creative Expression Through Dance, Body Movement and Dramatics: This session began with a review of the principles and procedures discussed in the cassettes and guides studied during the week.

1. Dance and Body Movement - Activities and Content
    a. participants performing as mimes walked about the room as if they were.
        (i) fat
        (ii) angry
        (iii) blindfolded
        (iv) in a dream
        (v) in a thick jungle
        (vi) on a narrow plank over a ditch
        (vii) on slippery ice
        (viii) sly and secretive
        (ix) rubbing soap out of their eyes

After discussion, participants also performed as if they were

(i) having a nightmare
(ii) being drawn to a spot against their will
(iii) caught in something very sticky
(iv) catching something very big

(v) bound hands and feet

(vi) inside a cocoon

(vii) being tickled with a feather

(viii) wearing too large or too small shoes

b. Subject matter that lends itself to creative dancing was discussed. Motivations arising from poems, stories, songs, pictures, photographs, and records were examined. These were then analyzed in terms of integrating them into children's learning activities in literature, music, art, and dramatics. Specific activities were used as examples

(i) the participants read a short paragraph about weather and then were asked to become the wind. They were asked to describe how they would feel and move if they were a summer breeze, and then the winter wind getting ready for a storm. As a follow up activity, they made pinwheels, using milk containers and straws. In this way they integrated creative movements with language arts, art, and science

(ii) a section from Grofe's "Grand Canyon Suite" was played and the participants were asked to move as if they were galloping horses, then tired work horses, then walking on a smooth mountain, and then on a bumpy road

(iii) individually, and in small groups, the participants, evoked by the following imagery, expressed movements related to being, doing, and feeling

    (a) be: water, bubbles, dripdrops, splashing fountains, waves
    (b) do: carry water in pails, hose the lawn, water ski
    (c) feel: the weightlessness of floating, walking out into cold water

c. Participants practiced moving every part of their bodies to different rhythmic beats. In order to convey the point that every movement occurs in space, has a time element, and uses weight, the following sample exercises were used

(i) to become aware of time, the participants ran very fast, walked very slowly, slowly grew as tall as they could, slowly curled up on the floor as small as possible

(ii) to become aware of space, the participants lifted a leg in front of them, lifted it up backwards and to the side, stepped forward, backward, and sideways, reached up to the ceiling, stretched out to touch the walls and the floors

(iii) to become aware of weight, the participants pushed down on the floor, lifted their arms up slowly and gently, stamped on the floor, walked on tiptoe, kicked out one leg as hard as they could, slid one foot along the floor smoothly and lightly.

d. Japanese haiku suggesting a strong feeling or a definite mood were read aloud. The teachers expressed emotions evoked by the poems. Other specific movement activities used with the participants were

   - (i) dancing out the complete life cycle of a flower from seed to the dropping of the last petal
   - (ii) flying kites
   - (iii) bicycling down a hill fast
   - (iv) plunging through deep snow
   - (v) walking like different animals
   - (vi) moving to different figures of speech (slow as molasses, snug as a bug in a rug, flat as a pancake, smooth as silk, bold as a lion)

2. Creative Dramatics - Activities and Content

   a. The teachers participated in activities that develop observation and sensory awareness

      - (i) participants were blindfolded and had to identify objects by smell, taste, and touch

(ii) exercises from the creative drama workshop cassette involved the participants in group activities

b. Strategies and ideas for fostering creative expression through dramatics were discussed with the points described on the cassettes being highlighted. Pantomime through body and facial movements were stressed.

(i) Participants pretended what it would be like to touch a hot stove, or taste a hot fudge sundae.

(ii) They pantomimed directing traffic and racing to put out a fire.

(iii) They created their own situations to pantomime.

c. Improvisation and role playing, stressing characterization, were used with one group of participants.

(i) A given character was assigned to each member of the group and participants did improvisational scenes.

(ii) A second group of participants was

requested to build a story around a given set of characters

(iii) A third group was given a simulated personal confrontation assigned roles and asked to work out their differences and provide a solution to the problem as presented.

d. A variety of resources, detailed in the teacher's guide, and providing many ideas for classroom implementation in creative dramatics, was reviewed.

e. The group viewed a half-hour video tape depicting elementary school children involved in pantomime and awareness exercises. This tape was recorded in a Brooklyn public school for use in the inservice training program.

f. Creative Dramatics. A 10 minute film, written, directed, and produced by fourth grade children in a Brooklyn public school was viewed. (This film, also part of the program materials prepared for the inservice course, shows children using pantomime in original skits.)

Cassettes and printed guides dealing with techniques, strategies, and ideas for creative writing and brainstorming were distributed to the participants for use at home and/or in school during the week.

Session VI

Creative Expression Through Writing and Problem Solving Through Brainstorming. The session begain with a review of the main ideas discussed in the cassettes and guides studied during the week.

Topical Outline

1. Ways of stimulating children were discussed and a variety of techniques that provide a jumping off point to foster creative writing were examined:
    a. storytelling (making mental images and then reproducing them on paper)
    b. picture viewing (inventing stories about pictures)
    c. staging dramatizations
    d. listening to records
    e. holding class discussions about children's experiences

f. listening to songs
g. reading fairy tales, folk tales, myths, limericks, fables to enrich imagery
h. using skeleton stories to stimulate sequential, creative story writing
i. posting provoking questions on bulletin boards

2. Some possible topics were examined:
   a. personal experiences
   b. personal matters of importance
   c. other people and their feelings
   d. places visited
   e. accounts about real or fictional events or people
   f. "Guess Who" or "Guess What" stories
   g. problems or desires
   h. ridiculous situations or "What if?" stories
   i. unended stories to complete

3. Aids to guiding creative writing were discussed:
   a. the physical environment
   b. the teacher's attitude (receptive and understanding, with respect for the child's work and his/her feelings about it)

4. Workshop Activities:

   a. A set of thirty slides prepared by the author and entitled "Just Suppose - A Trip for the Imagination," was shown to the teachers. The slides depicted a variety of animals in different settings. Participants were asked to write how they would feel, what they would do or say if they were the animals depicted in the slides. These slides were used in the teachers' classrooms to stimulate creative writing in the children.

   b. A series of eleven slides called "Strange Happenings" was shown to the teachers who were then asked to write an original explanation for the occurrence viewed in each slide. (These would also be used in the program with their children.)

   c. An original set of slides on "Creative Art-Slide Making" and an original film on "Creative Film Making" were shown to the teachers. They then participated in the construction of art-slides, using acetate sheets and cardboard frames. A discussion on the use of animation in filming followed this activity.

5. Brainstorming and the use of synectics to creatively solve problems:
    a. Alex Osborn's brainstorming model with four basic ground rules was used as the example of the techniques.
        (i) criticism is ruled out (no judgments of ideas initially)
        (ii) free wheeling is welcomed (wild ideas are sought)
        (iii) quantity is welcomed (a large number of ideas)
        (iv) combination of improvements is sought (participants suggest how ideas can be turned into better ideas or how two or more ideas can be joined to form another idea)

    b. A slide program of 44 slides and a slide-talk prepared by Alex Osborn and called "The Golden Key to Problem Solving," was shown to the group. This was used as orientation for the participants who were about to participate in group brainstorming

c. Instructions were distributed to participants who then formed two brainstorming groups and brainstormed an assigned problem. The various ideas generated during the brainstorming session were then evaluated as possible solutions to the problem.

IV. EVALUATION STAGE

A. The Torrance Tests of Creative Thinking (TTCT)

1. Description of TTCT. The Torrance Tests of Creative Thinking consists of four batteries of test activities, two verbal and two figural. The activities that are included in the tests ask participants to think divergently and sample different mental processes of creative thinking ability.

The first task in the Figural Test is picture construction and is designed to stimulate originality and elaboration. Each child was given a piece of colored paper of a curved shape and asked to draw a picture that no one else would think of with this piece of paper as a part. The children were asked to add new ideas to the first idea and use the materials supplied to tell as interesting and exciting a story as possible. They were asked to choose a clever and unusual name or title and write it at the bottom of the page. Sample student responses are included in Appendix Section V.

The two succeeding sections of the Figural Test, Incomplete Figures and Repeated Figures, are designed to elicit greater variability in fluency, flexibility, originality, and elaboration.

The first task in the Verbal Test is "Asking," in which the children are asked to write out all the questions they can think of about a picture shown on the first page of the test. Activity two requires that they list as many as they can of the possible causes of the action shown in the picture. Activity three involves guessing consequences, with the children listing possibilities of what might happen as a result of what is taking place in the picture. Activity four calls for product improvement (here, a toy elephant was displayed to the group) and asks the children to list the cleverest, most interesting and unusual ways they can think of for changing a product so that children will have more fun playing with it. The children are asked to list interesting and unusual uses of cardboard boxes for activity five. Activity six extends this by asking the children to write as many questions as they can that might arouse interest in others concerning cardboard boxes. An improbable situation makes up activity seven, with the children asked to use their imaginations to think of exciting things that would happen if clouds were created with strings which hang down to earth.

For examination of the Torrance Tests of Creative Thinking, see Appendix Section III.

2. Validity and Reliability of TTCT. Test-Retest reliability coefficients were examined for the verbal and figural batteries of the TTCT as reported in the Norms-Technical Manual of the TTCT. On the basis of the reported reliability coefficients, I decided that the instrument was 'reliable enough' to assess the differential effects of the experimental program.

I operationally defined the constructs in this Practicum in terms of Torrance's operational constructs (fluency, flexibility, elaboration, originality). Since Torrance defines those constructs as a process and has satisfactorily established construct validity for that process, for my purposes the tests are operationally valid.

3. Administration of the TTCT. During the last week of October, 1974, Verbal Test-Form A and Figural Test-Form A (See Appendix Section III) were administered as a pre-test to the children in the five classes of the teachers involved in the experimental group. These consisted of five groups of children: one fourth grade class, three fifth grade classes, and one sixth grade class. These same tests were administered to children in five classes whose teachers were not involved in the inservice training sessions and who had no access to the program materials. The control group included two classes of fourth grade children, two classes of fifth grade children, and one class of sixth grade children. Simultaneity of testing was accomplished with the experimental and control groups taking the pre-test and post-test at the same time on the same day.

During the first week of February, 1975, alternate tests of equivalent form, the TTCT Verbal Tests-Form B and Figural Tests-Form B, were administered to both groups as a post-test.

The teachers in the experimental and control groups were given careful instructions in the administration of these tests. Using the directions manual and scoring guide accompanying each battery of tests, I described in detail how each test was to be given.

a. Administering the Pre-Tests. The two batteries of tests were administered as group tests. (These can be administered as group tests to children as early as in the fourth grade.) With a few children who had difficulty in writing, the verbal activities were administered orally and individually in order to obtain valid and reliable measures.

The Figural Test-Form A was administered first, with the proper psychological climate and atmosphere established to create the expectation that examinees would enjoy the activities. The children were given pencils and crayons. For the fourth activity, which involves product improvement, a toy elephant was exhibited to the examinees.

The Verbal Test-Form A, consisting of seven parallel tasks (see enclosed copy of tests in Appendix Section III) requires a total of 45 minutes to administer, with some additional time needed for orientation and instructions. The examiners were instructed not to use the word "tests," but to refer to the materials by using words like "booklet" or "activities" or "exercises." The purpose of this suggestion was to avoid the threatening atmosphere that is often associated with testing and instead to create an atmosphere of game-like creative thinking and problem solving that the children would enjoy. The tests were administered to both the experimental group and the control group in classrooms, with the Figural Pre-test-Form A administered on the morning of October 4, 1974, and the Verbal Pre-Test-Form A in the afternoon of the same day.

The tasks that are built into these tests are designed to bring into play different mental processes that have been identified as being part of the creative process. They require the examinee to think in a divergent manner rather than a convergent one.

b. Administering the Post-Tests. The two batteries of test activities, Figural-B and Verbal-B were administered as group tests. As with the pre-tests, a few children who had difficulty in writing were given parts of the tests orally and individually in order to obtain valid and reliable measures. The tests were equivalent and alternate forms to Figural-A and Verbal-A. The instructions were identical to those given during the pre-testing. The tasks on the two batteries were parallel with the tasks on the pre-tests, except that they were concerned with different content. (For example, the activity involving ideas for improving a product utilized a toy monkey on Verbal-B where Verbal-A had used a toy elephant.)

As in the case of the pre-tests, the post-tests were administered in classrooms with the control group children taking the tests at the same time as the experimental group. The Figural Post-Test-Form B was administered on the morning of February 3, 1975, and the Verbal Post-Test-Form B in the afternoon of the same day.

4. The Teachers and the TTCT. Three teachers commented that the time restriction which prevails in the TTCT severely limits the children and does not permit them to "show all they can do." They asked that the time limits be extended so that they could encourage the

children to keep trying on every item. These teachers seemed to be unaware that time limits are needed as one way of controlling conditions. It was explained to them that if the children were given excessive amounts of time on the test, some of them would use that time to invent strategies that might alter or improve their performance. This advantage might change the character of the test and the variables it measures, throwing doubt upon the validity of the instrument. All tests were administered as per the instructions in the TTCT Directions Manual.

Some teachers also questioned the playful, gamelike atmosphere that the test's administrative instructions required them to introduce.

Teachers expressed their belief that "a test is a test, even when it is called a game." They did not believe that the children would be deceived by the ruse. Administration of the Verbal Pre-Testproved them to be right. This was subsequently borne out during administration of the Verbal Post-Test. The children saw these as part of a testing procedure in spite of the examiners' comments to the contrary. All the teachers did report however, that the children enjoyed the activities in the

Figural Tests-Form A and B.

Four of the teachers indicated that while their children looked forward to taking the post-test, they demonstrated a lack of motivation while in the process of doing the Verbal Test Form B. The teachers attributed this to the test itself, claiming that one of the diagrams was poorly constructed and difficult to understand.

Other comments of the teachers regarding the TTCT Verbal Post-Test indicate further problems of a very practical nature. The creative tasks on the test may not be challenging for some examinees. Students may see the tasks as boring, unexciting, and unstimulating rather than unusual and imaginative. Perhaps, because the examinees worked on similar problems before, the testing had become an "old hat" experience for them.

This information was conveyed to Dr. Torrance, author of the TTCT, along with a suggestion for his consideration: that two tests be designed, differing sufficiently so that while testing the same skills, examinees would not recognize the sameness of the tasks and lose the freshness of a new experience which is a motivating factor.

5. Scoring the TTCT. Torrance suggests that studies of scorer reliability of the TTCT indicate that it is not necessary to have special training in scoring these tests to assure reliable results. However, I chose to utilize the services of specially trained scorers rather than those of untrained classroom teachers or educational secretaries. The rationale for this decision was based on my wish to obtain high reliability of scoring and not leave the project open to the challenge of inter- and intra-scorer reliability or to the question about the reliability of results derived by untrained scorers. All of the Torrance Tests are "write-in" booklets and scoring can be accomplished only by hand. Scoring was done by Personnel Press Scoring Service - Georgia Studies of Creative Behavior, Athens, Georgia, under the supervision of Dr. E. Paul Torrance. All pre-tests and post-tests in the experimental group were scored. A random selection of 50 tests (25 of the pre-test and 25 of the post-test) from the control group was chosen for scoring. Mr. Joseph Pidal, a statistician at Hofstra University, generated numbers which were used in the selection of tests to be scored. (See Appendix Section IV)

B. Rating Samples of Children's Work in Art and Writing.

Fifty samples of art work done by the children were randomly selected. Twenty-five samples were randomly chosen before the project implementation in October, 1974, and twenty-five samples were randomly chosen at the conclusion of the project in February, 1975, and given to an independent evaluator to judge for originality.

The chairperson of the Art Department in Island Trees High School served as judge. She was selected because of her expertise and experience in assessing creativity in art for over twenty-five years through her students' work, art exhibitions, art contests, and art fairs. Each piece of work was rated on a scale of zero to four based upon mutually established criteria to measure creativity.

Fifty samples of written work done by the children were randomly selected. Twenty-five samples were randomly chosen before the project implementation in October, 1974, and twenty-five samples were randomly chosen at the conclusion of the project in February, 1975, and given to an independent evaluator to judge for creativity. The creative writing teacher in the English Department of Island Trees High School served as judge. He was selected because of his expertise and experience in assessing creativity in writing over twenty years through his students' work in creative writing courses and through the selection of students' creative literary work for publication. Each piece of written work was rated on a scale of zero to four based upon mutually established criteria to measure creativity.

1. Selection of Criteria of Creative Performance on Art and Writing Samples. Since creative talent from the standpoint of aptitudes is composed of numerous special abilities, and since the criteria of creative performance in the classroom area are also complex, no one test of a creative ability can be expected to measure all criteria involved in creative behavior.

The art and writing judges carefully examined and evaluated criteria of creative talent to be used to ensure that a wise selection of predictors would be made. It should be pointed out that each of these judges was already known to be a creative person and each had much prior experience in stimulating creativity in the classroom. Two main criteria, visualization and originality, were seen to be variables covering different aspects of creative performance. The qualities to be appraised were analyzed into concrete and relatively specific aspects of behavior and judgments were made of these behaviors.

a. Art and Writing Criteria:

(i) Visualization. Whether they work with words or with art materials, creative individuals apparently almost always have the gift of producing visual images and other sensor equivalents of the experience, feeling or emotion they are describing. The power to translate these images into artistic or written expression was selected as a criterion of creative ability. The use of picturesque speech to suggest a scene and the use of color and form to generate a definite mood and feeling are examples of this ability.

In evaluating each work for visualization, the judges asked: Was the work vivid, lively, intense, vigorous, fresh? Did it stir emotionally? Did it graphically convey emotions and feeling?

(ii) Originality. Creative individuals apparently can synthesize different elements in an unusual and imaginative way. In evaluating each work for originality, the judges asked: Did the work have an original setting, form, design, or plot? Was a fresh point of view explored? Was the idea and composition catchy, surprising, providing an usual twist rather than a stereotyped presentation? Did the work display an individuality and versatility of style?

b. Rating Scale:

The written and art work as rated on a scale of 0-4.

0 if the quality under consideration is absent from the written or art work

1 if the quality under consideration is at a low level or is poorly expressed in the written or art work

2 if the quality under consideration is present but is neither strikingly evident or poorly expressed in the written or art work

3 if the quality under consideration is definitely present and is more evident and better expressed in the written or art work

4 if the quality under consideration is at a high level and is strikingly evident and highly noticeable in the written or art work.

The identity of the students was not revealed to the judges. They were kept ignorant of any information that would reveal which student had done a particular sample of art or written work and whether the work was done prior to, during, or at the conclusion of the pilot project. Also they did not know whether the work was from the experimental or control group, lest this knowledge bias their ratings.

The data collected from assessments A and B provided summative feedback for later evaluation of the extent to which the project met its goals.

C. Assessment of Program Materials

1. Feedback Via Classroom Visits and Meetings.

The parameters of the feedback program were fairly simple. Valuable information was obtained from teachers and students who used the program materials in the five classrooms of the experimental group. Information about content, format, and materials was forwarded to me each week during the inservice sessions and during the project via teacher logs and anecdotal comments. In addition, the five teachers and their classes were visited weekly to see how things were really working in the classrooms.

Students were asked what they liked and did not like about the materials or program. At the end of each week, this formative feedback was condensed and then appropriately edited and used to revise the instructional guides or portions of the audio cassettes. Certain activities and slides were dropped from the program and new ones added to it, as the project progressed.

There is no such thing as a teacher-proof curriculum. Materials and methods interact with styles of teaching; and programs which are effective when practiced by one teacher often become failures in the hands of another. While this program utilizes innovations in methods and materials, it places great emphasis upon the teacher participants as crucial instruments for inducing creative expression in children.

Over a period of eleven weeks, including eleven separate observations for each class, incidents which indicated the existence of the agreed upon sets of activities were observed. During these visits, the author noted the teachers' behavior in the classrooms and the influence they exerted upon their students. Teacher behavior relevant to the fostering of flexibility, ideational fluency, originality, and elaboration was singled out for reinforcement during the meetings that followed each classroom visit.

The teachers were assisted in identifying behaviors they enacted that encouraged in their students a free expression of feelings and the use of new ideas, divergent thinking, and novel responses to problems or questions. Teacher resourcefulness, improvisation, and ingenuity in utilizing materials and resources to establish classroom environments conducive to creative expression were also cited for reinforcement during the post-observation meetings, carried out under time and conditions arranged to the mutual satisfaction of the teacher participants and the evaluator.

2. Teacher Logs (A Record of Incidents). The participants accumulated data to be discussed at these same sessions by keeping daily logs, which listed the activities in which the children engaged along with anecdotal comments about the children's behavior. (See Appendix Section VII)For the short daily records on each child, each teacher used a format which noted briefly what the child did in the way of performing creative activities (e.g. drew a picture, made a collage, built a truck out of boxes, wrote a poem, described feelings

about music).

The anecdotal records included comments about certain activities and concrete observations of behavior which caught the teacher's attention. Typical comments included statements about observations such as the following: the events which led Bob and Tom to a role playing experience; how Mary expressed herself in a planned activity; how Hank described the animal he acted out. The data formed the basis for periodic assessment sessions to determine the effectiveness of program components while the program was in use.

By pulling together the information accrued in these records over a period of eleven weeks, rather precise statements could be made about individual children. In addition, the teachers reported that this helped them to develop greater skill in diagnosing children's interests and needs in regard to the overall classroom program. Teachers further reported that through record keeping and by giving this kind of particular attention to their children they were able to acknowledge the individuality of each child.

The teacher assessments provided valuable information about what was happening to the children, how involved they were becoming in their learning experiences, how well they were able to break the "mind set" and think of alternatives. and how well they were able to get along and work together.

With this data, the author and the teachers could relate the reactions of students to the activities and materials currently characterizing the classroom program. Inferences were drawn concerning methods and media which appeared to be highly effective. Those which produced negative reactions were identified. Such inferences were extended to examine the progress and needs of individual students. The teachers were also able to compare the general reaction of the children to each area and each activity.

This examination of the data at the classroom level enabled the teachers and the author to identify areas in which changes in or reinforcement of materials, activities, and procedures were desirable. Based on this information each teacher became involved individually and in cooperation with the other participants in the development of the program. (A quick glance at the written guides will reveal additional material in certain sections which were identified by participants as in need of alternative activities.) Samples of the students' work were important sources of information in regard to making qualitative judgments about the children's development and the classroom program.

In looking through this material, it is relevant to note that several new activities were initiated:

a. a puppet club was formed with children carrying out several creative projects

b. an art club was formed with children producing materials for bulletin boards and scenery for plays

c. a thespian club was formed with children creating and performing their own class plays

While alternative forms of the Torrance Tests of Creative Thinking, which sought to document statistically significant gains in ability to be flexible, fluent, original, and elaborative in producing ideas, were administered, equally important to the author was evidence submitted by the teacher participants citing how the children had become increasingly more involved in creative aspects of their learning. Increasingly, it was reported that students gave expression to their feelings and their own interpretations of events, learned how to tolerate frustration and withstand failure in initiating new tasks, became more sensitive and empathetic in their relations with fellow students, asked more questions, and sought new modes of inquiry in their desire to learn.

Any study or observation of educational results is related in some degree to evaluation of the work of teachers. However, in this project the teachers were not being "rated," and the data collected was obtained without creating tensions and anxieties and concerns traditionally related to instructional evaluation.

V. Meeting Project Objectives

In preparing the materials for this program, research relevant to the problem of devising techniques for increasing the use of imagination as a springboard for creativity was reviewed.

Instructional materials designed to stimulate creativity, suitable for classroom use in grades four, five, and six, were successfully developed. These materials and methods were found to be appropriate for administration to individual students or to entire classes. Some of the teacher training materials were provided in self-instructional form and encouraged diversity in development and implementation by the participants. The features of self-administration encouraged the individual teachers to determine their own pace in studying the materials. Other components were utilized in large group instructional settings during the workshop sessions.

The inservice course was not offered in competition with other inservice courses or as an isolated educational experience for the staff. It was prepared so that it could be integrated with the regular classroom program and implemented as part of the district's total inservice educational program.

During the inservice training sessions teachers were involved in numerous activities that called for their creative expression. Then, further to promote the creative behavior of their children, they were provided with materials which could be introduced into the classroom and which fostered creative activity.

Reinforcement for the children came from teacher encouragement and respect for their imaginative ideas and creative performance. Reinforcement for the teachers came from the author who encouraged them to employ creative activities in their classes.

During the six week inservice course, and throughout the pilot project, the teachers made suggestions for supplementing the program with activities that would enhance their own acquisition of skills and that would encourage imagination and creativity in their students.

A determination was made of the specific needs of each participating teacher by discussing her distinctive disposition and style of teaching, and reviewing recorded observations of children involved in the activities, and the manner in which she utilized the ideas from the tapes, guidebook, and training sessions. This information led to the development of new specific activities for classroom use. In most situations, the use of strategies that had already been prepared was recommended. These activities provided opportunities for the practice of fluency, flexibility, elaboration, and originality in art, dance, writing, and drama.

In general, techniques that would reflect as fully as possible the variety of methods for the facilitation of creativity were made available to the teachers.

In evaluating the inservice training sessions, the teachers reported that the course content, activities, and instructional techniques were very helpful in carrying out the new approaches in their classrooms.

The following are some statements made by individual teachers:

"I found that the course increased my appreciation and recognition of unusual ideas in the children."

"The course provided me with greater inspiration and confidence in teaching for creative expression."

"It established for me a better understanding of creativity and the kind of thinking that is involved in the process."

"The workshops were excellent sources of new ideas."

The teachers were able to interpret and apply the procedures for involving children in creative experiences. Discussions with the teachers and the children revealed that generally the children were enthusiastic and highly motivated by the program.

Through their logs, and during conversations at the weekly meetings, the teachers reported that the children were drawing, painting, dancing, acting, and expressing themselves delightfully and spontaneously in a variety of ways. Observations were made of children overcoming previous restraints and becoming more open, both intellectually and emotionally. Increasingly, the teachers reported that the children demonstrated creative behavior by creating characters, action, and dialogue from stories, dancing to music, and acting out experiences and fantasies. While a few of the children were more individualistic, self-assertive, self-sufficient, and adventurous than others, most produced new ideas.

The reports of the teachers at meetings and in the logs were honest. They were not altered to fit a preconceived notion of what should have happened. Failures as well as successes with activities were reported. Those activities that evoked limited success were included as well as those which elicited excellent responses.

A relationship that supported the integration of the instructional program and innovation in their classrooms was established with the teachers. The cooperation of the building principal was obtained in each of the two schools in which the pilot project was implemented. The principals, in turn, provided support for the teachers who became more involved in assuming new instructional responsibilities.

Resources rich in ideas and techniques for integrating creative activities with regular classroom instructional programs were made available to the teachers. They were then encouraged to assume personal responsibility for their own growth in skills and techniques of instruction. Through classroom visits, weekly meetings, and reports in the logs, it was observed that all of the teachers took an active part in researching the subject and applying strategies that fostered creative behavior in their children. They showed an increasing awareness of the need for encouraging creative behavior, and they became more imaginative in their preparation and use of materials. They created their own exercises to stimulate spontaneity and naturalness of expression by having students role-play classroom conflicts, brainstorm class-selected problems, think of new uses for some products, write book reports in an original manner, invent stories from pictures, think of alternative solutions to problems, write new endings to stories, express ideas and feelings stimulated by art and music, and make up word games.

The teachers established classroom environments which encouraged creative expression. Some were "loose" and allowed much freedom. Others encouraged freedom with discipline, but not domination.

The removal of certain blocks to creative functioning provided the children with freedom for mental and emotional exploration. The teachers became effective in improving the children's awareness of self, others, and the environment, and in overcoming feelings of inability, inadequacy, lack of self-trust, and negative reactions to comments of their classmates about their creative ideas.

The teachers stressed deferment of judgment so that children could express ideas without anxiety or concern as to their value, acceptability or appropriateness.

The teachers rated the ideas and techniques described in the guidebooks as "excellent." Without exception, they found these strategies "extremely valuable" for stimulating creative expression in the children. They also reported that the children were very receptive to many of the activities and responded in enthusiastic ways. The teachers attributed improved classroom attendance to statements by the children indicating that they did not want to miss opportunities to participate in creative drama and art activities.

Can teachers who have been taught and have conducted their own classes in traditional authoritative ways encourage children to behave creatively and to learn in creative ways? To make such a change requires considerable change in orientation and the development of a number of skills. Such change also requires that teachers be concerned about the effectiveness of their teaching and be willing to expend energy in practicing and mastering these skills.

If teachers are thinking about changing their teaching style to encourage more creative development among their students, they have to ask themselves how far they are willing to go to accomplish such a goal. They have to be willing to give their own creative abilities a workout and develop them. This program asked teachers to break out of the day to day routine of simply getting across some piece of subject matter and undertake a deliberate and systematic effort through workshops to develop some new skills.

Obviously, it would be presumptive to equate the teachers who took part in this project with all teachers in the district, The fact that they volunteered to take the inservice course suggests a degree of interest and motivation in learning about the development of creativity in children that may not be present in other staff members. It should be noted, however, that the five teachers selected to participate in the project did not uniformly possess characteristics that would ensure their success in using the program. Two felt that they were rigid and authoritarian in their approach to children; another claimed that she was dominated by time and primarily concerned about covering subject matter, while two believed they were excessively preoccupied with orderliness and pupil behavior.

In spite of what would appear to be negative characteristics precluding successful implementation of techniques to develop creativity in their children, these teachers demonstrated a willingness to examine new ideas.

The kind of teacher who would involve herself in this type of program would be one who was receptive to exploring new ways of teaching. This indeed seemed to be one characteristic descriptive of all five of the participating teachers.

The five teachers seemed to possess other important qualities needed for successful involvement in the project: a sensitivity to their pupils' emotional needs, a high level of interest in promoting the development of original thinking in their pupils, and intellectual energy that would enable them to give willingly of themselves in the classroom. As the project progressed, they became less dominating and began to encourage more student initiated activity. They showed evidence of giving support to the children in helping them overcome inertia, frustration, fear of failure, and humiliation experienced at the hands of classmates.

Conversations with the teachers, examination of their logs, and classroom visits, confirmed that the participating teachers changed in their attitudes and motivation toward developing creativity in their children. They implemented many of the program's techniques, successfully involved the children in creative activity, and initiated other techniques that they developed. (There may be an important positive relationship between the teachers' creative motivations and the growth in the children's creative ability.)

It is important to recognize that teachers educated in traditional ways, and who teach authoritatively, can encourage their pupils to behave creatively and learn in creative ways. One possible outcome may be that the prevailing prejudice that exists among some of the teachers in Island Trees against the teachability of creativity may give way to a belief in the possibility of its development.

It may well be that as the development of imagination becomes valued and more important within the district, that teachers will become more innovative in working with children and that some of their efforts will foster creativity. Perhaps, if teachers realize the influence they exert on the creative lives of children, they will be stimulated toward this goal.

VI. RESULTS

The Torrance Tests of Creative Thinking

Table 1 "Results of Pre-Post (Form A and Form B) Torrance Tests of Creative Thinking, Verbal and Figural Batteries, for Experimental Groups," presents the pre and post means, standard deviations, number of subjects, correlation coefficient between pre and post, and resultant t values for the experimental group in each 'grade'* and 'total'** on each subtest in the TTCT Verbal and Figural Batteries.

INSERT TABLE 1

The results show a significant positive overall change as measured, in both the Verbal and Figural Batteries for the 'total' experimental groups. Significant change was also evidenced in each 'grade' for the experimental group, on each subtest of the Verbal Battery. Although this finding was not replicated in all grades on the Figural Battery, all results were in the hypothesized direction, six of the twelve 'grade' analyses having evidenced significant positive change.

Significance levels for this and all other analyses were set at the $p < .05$ level. However, many findings were significant beyond the $p < .01$ level.

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*Refers to individual analyses for each of grades 4, 5, and 6 in each subtest unless otherwise noted.

**Refers to combined scores of grades 4, 5, and 6 in each subtest unless otherwise noted.

Table 2 "Results of Pre-Post (Form A and Form B) Torrance Tests of Creative Thinking Verbal and Figural Batteries, for Control Groups," presents the pre and post means, standard deviations, number of subjects, correlation coefficient between pre and post, and resultant t values for the control group in each 'grade' and 'total,' on each subtest in the TTCT Verbal and Figural Batteries.

INSERT TABLE 2

The results in Table 2 do not show significant overall positive change as measured, for the control group. Parenthetically, negative findings were evidenced in fifteen of the twenty eight analyses.

Table 3 "Results of Post-Post (Form B and Form B) Torrance Tests of Creative Thinking, Verbal and Figural Batteries, Mean Analysis Between Experimental and Control Groups,"presents the post means and standard deviations for the experimental and control groups, for each 'grade' and 'total.' The resultant t value and its corresponding degrees of freedom (d.f.), for the TTCT Verbal and Figural Batteries are reported.

INSERT TABLE 3

The results show the experimental group 'total' analyses evidenced significant positive differences when compared to the control group, for all analyses, with the exception of the Figural-Fluency analysis. Moreover, Table 3 revealed only four of the twenty one grade analysis to be significant. However, the experimental group differed from the control group on all 'grade' analyses in the hypothesized direction.

Table 4 "Results of Pre-Post Writing and Art Analysis, on Visualization and Originality Criterion, For Experimental Groups," presents the pre and post means, standard deviations, number of subjects, correlation coefficient between pre and post and resultant t values for the experimental group in each 'grade' and 'total' on the Visualization and Originality subtest, for Writing and Art Analyses.

INSERT TABLE 4

Table 4 revealed positive significant change as measured, in only four of the sixteen analyses. However, all analyses evidenced change in the predicted direction.

Nevertheless, Pre to Post mean scores of subjects increased marginally in the predicted direction on each of the sixteen analyses.

Table 5 "Results of Intra-Rater Reliability Analysis for Writing and Art Tests, on Visualization and Originality Criterion," presents the means and standard deviations for twenty art and twenty writing random samples and the intra-rater reliability coefficients thereof. All intra-rater reliability checks were significant at the $p < .05$ level.

INSERT TABLE 5

Table 1

Results of Pre-Post (Form A and Form B) Torrance Tests of Creative Thinking, Verbal and Figural Batteries, For Experimental Groups

Verbal Battery

Subtest	Grade	Number of Subjects	Pre Mean	Post Mean	Pre s.d.	Post s.d.	corr.Bet Pre&Post	Resultant t value
Fluency	4	21	45.33	66.81	23.87	24.25	.65*	4.18*
	5	64	63.50	82.94	35.19	49.59	.66*	4.13*
	6	25	66.28	96.92	21.79	17.04	.36	6.15*
	total	110	58.37	82.22	30.44	41.38	.60*	7.43*
Flexibility	4	21	22.62	27.57	10.54	9.70	.67*	2.66*
	5	64	28.03	33.83	11.79	11.67	.61*	4.45*
	6	25	29.56	39.52	7.34	8.06	.65*	7.55*
	total	110	26.75	33.64	10.69	10.58	.63*	7.81*
Originality	4	21	31.62	78.24	24.12	25.87	.59*	5.61*
	5	64	57.22	96.05	34.45	20.15	.47*	5.32*
	6	25	64.56	78.64	26.87	24.37	.43*	2.51*
	total	110	51.44	85.35	31.07	43.86	.47*	7.37*

Figural Battery

Subtest	Grade	Number of Subjects	Pre Mean	Post Mean	Pre s.d.	Post s.d.	corr.Bet Pre&Post	Resultant t value
Fluency	4	21	19.19	19.24	5.86	5.87	.36	.03
	5	64	20.33	25.98	7.88	9.31	.35*	4.55*
	6	25	18.68	21.60	7.75	8.36	.51*	1.78*
	total	110.	19.40	22.27	7.50	8.54	.45*	3.54*
Flexibility	4	21	14.81	14.19	3.85	4.10	.20	.55
	5	64	14.69	18.42	5.47	5.56	.30*	4.60*
	6	25	14.95	17.86	8.26	8.46	.21	1.35
	total	110	19.40	22.27	5.98	6.12	.45*	3.5[illegible]
Orginality	4	21	25.38	26.29	8.22	11.47	.34	.35
	5	64	27.07	49.92	13.11	18.94	.30*	9.32*
	6	25	38.04	34.52	14.26	16.49	.39*	1.85*
	total	110	26.82	36.91	12.62	17.19	.23*	5.59*
Elaboration	4	21	108.81	134.03	39.17	45.67	.16	2.48*
	5	64	113.99	108.77	49.07	59.74	.24	1.10
	6	25	111.96	114.60	42.00	37.90	.63*	.38
	total	110	111.59	119.25	44.77	59.62	.47*	2.20*

* p<.05

Table 2

Results of Pre-Post (Form A and Form B) Torrance Tests of Creative Thinking, Verbal and Figural Batteries, for Control Groups

Verbal Battery

Subtest	Grade	Number of Subjects	Pre Mean	Post Mean	Pre s.d.	Post s.d.	corr.Bet Pre&Post	Resultant t Value
Fluency	4	10	47.00	60.60	43.36	39.70	.76*	1.99
	5	10	62.30	43.20	21.56	15.57	.52	-3.04
	6	5	72.80	86.80	35.60	35.61	.97*	2.06
	total	25	60.70	63.53	34.52	31.32	.91*	.91
Flexibility	4	10	20.70	25.20	10.00	9.72	.78*	1.96
	5	10	30.40	24.00	6.79	7.32	.32	-2.34
	6	5	27.00	30.60	8.99	15.00	.99*	8.86*
	total	25	26.03	26.60	8.64	10.21	.75*	.41
Originality	4	10	26.40	44.10	37.95	38.20	.93*	4.08*
	5	10	45.30	33.60	17.89	12.34	.29	-1.89
	6	5	56.40	71.40	16.25	32.32	.97*	2.56*
	total	25	42.70	49.70	27.52	29.22	.86*	2.25*

Figural Battery

Subtest	Grade	Number of Subjects	Pre Mean	Post Mean	Pre s.d.	Post s.d.	corr.Bet Pre&Post	Resultant t Value
Fluency	4	10	19.10	15.10	7.01	6.30	.05	-1.62
	5	10	24.90	23.20	8.01	5.50	.52	- .67
	6	5	18.40	22.40	4.92	4.49	.76	1.13
	total	25	20.80	20.23	7.83	7.08	.51*	- .37
Flexibility	4	10	15.30	12.50	6.79	3.95	.25	-1.93
	5	10	22.70	17.70	7.75	5.04	.61*	-2.44
	6	5	16.60	16.60	7.01	4.35	.65	0.00
	total	25	18.37	15.60	7.26	4.51	.55*	-2.25
Originality	4	10	34.40	35.70	7.26	5.77	.23	- .22
	5	10	27.30	23.40	14.74	14.06	.21	-1.03
	6	5	24.80	27.60	10.43	14.52	.24	- .48
	total	25	28.83	28.86	11.39	10.11	.13	- .02
Elaboration	4	10	57.00	64.90	18.92	18.07	.42	- .95
	5	10	89.60	77.90	35.85	32.83	.56	-1.07
	6	5	56.60	71.40	25.39	36.89	.87*	2.20
	total	25	67.73	71.40	28.04	28.87	.56*	.68

* $p < .05$

Table 3

Results of Post-Post (form B and form B) Torrance Tests of Creative Thinking, Verbal and Figural Batteries, Mean Analysis Between Experimental and Control Groups.

Verbal Battery

Subtest	Grade	Post Exp. Mean	Post Con. Mean	Post Exp. s.d.	Post Con. s.d.	d.f.	Resultant t value
Fluency	4	66.81	60.60	24.25	39.70	29	.25
	5	82.94	43.20	49.59	15.57	72	1.79*
	6	96.92	86.80	17.07	35.61	28	.39
	total	82.22	63.53	41.38	31.32	123	2.86*
Flexibility	4	27.57	25.20	9.70	9.73	29	.36
	5	33.83	24.00	11.67	7.32	72	1.52
	6	39.52	30.60	8.06	15.00	28	.79
	total	33.64	26.60	10.58	10.21	123	9.48*
Originality	4	78.24	44.10	25.87	38.20	29	1.06
	5	96.05	33.60	20.15	12.32	72	5.65*
	6	78.64	71.40	24.37	32.32	28	.26
	total	85.35	49.70	43.87	29.22	123	4.53*

Figural Battery

Fluency	4	19.24	15.10	5.87	6.30	29	.87
	5	25.93	23.20	9.31	5.50	72	.55
	6	21.60	22.40	8.36	4.49	28	.13
	total	22.27	20.23	8.54	7.08	123	1.37
Flexibility	4	14.19	12.50	4.10	3.95	29	.55
	5	18.42	17.70	5.56	5.04	72	.77
	6	17.86	16.60	8.46	4.35	28	1.22
	total	22.27	15.60	6.12	4.51	123	3.61*
Originality	4	26.29	35.70	11.47	5.77	29	1.68
	5	49.92	23.40	18.94	14.06	72	2.36*
	6	34.52	27.60	16.49	14.52	28	.46
	total	36.81	28.86	17.19	10.11	123	2.12*
Elaboration	4	134.08	64.90	45.67	18.07	29	2.83*
	5	108.77	77.90	59.74	32.83	72	.88
	6	114.60	71.40	37.90	36.89	28	1.18
	total	119.25	71.40	59.62	28.87	123	5.70*

* $p < .05$

Table 4

Results of Pre-Post Writing and Art Analysis, on Visualization and Originality Criterion, For Experimental Groups

Writing

Subtest	Grade	Number of Subjects	Pre Mean	Post Mean	Pre s.d.	Post s.d.	corr.bet. Pre&Post	Resultant t value
Visualization	4	5	1.60	2.20	.49	.75	.76*	2.45*
	5	15	2.34	2.60	1.08	.88	.43*	.94
	6	5	2.00	2.20	.89	1.17	.38	.35
	total	25	2.12	2.44	.99	.94	.29*	1.36
Originality	4	5	2.00	2.20	1.41	.75	.76*	.41
	5	15	2.34	2.80	1.08	1.05	.42*	1.52
	6	5	2.00	2.80	.90	.75	.30	1.63
	total	25	2.12	2.68	1.14	.99	.62*	2.92*

Art

Subtest	Grade	Number of Subjects	Pre Mean	Post Mean	Pre s.d.	Post s.d.	corr.bet. Pre&Post	Resultant t value
Visualization	4	5	1.80	2.40	1.17	1.02	.27	.90
	5	15	2.13	2.47	1.03	1.26	.06	.79
	6	5	2.40	2.20	1.36	1.17	.34	.27
	total	25	2.12	2.40	1.14	1.20	.28	.85
Originality	4	4	1.60	2.20	.49	.75	.76*	2.45*
	5	15	2.06	2.80	1.06	1.05	.61*	2.96*
	6	5	2.40	2.80	1.02	.75	.63*	1.00
	total	25	2.00	2.40	.98	.98	.04	1.58

* $p < .05$

Table 5

Results of Intra-Rater Reliability Analysis
For Writing and Art Tests,
On Visualization and Originality Criterion

Test	Criterion	Number of Subjects	Mean X	Mean Y	s.d. X	s.d. Y	Intra-Rater Reliability coef.
Writing	Visualization	20	2.70	2.45	.90	.80	.84*
	Originality	20	2.85	2.75	.78	.84	.62*
Art	Visualization	20	2.35	2.40	.89	.80	.85*
	Originality	20	2.85	2.75	.78	.84	.62*

* $p < .05$

A. Discussion

The results indicated in Table 1 strongly suggest that the intervention produces significant positive change in creative behavior as measured. This change, however, is not as consistently evidenced for figural abilities as for verbal abilities in the fourth, fifth, and sixth grade analyses. However, the 'total' figural analyses were significant, suggesting that the relatively small sample size mitigated against significant findings in 'grade' analyses. The results of Table 2 suggest that positive change did not occur without the intervention. Any significance in those analyses may be attributable to chance error. The findings reported in Table 3 again suggest that the intervention did produce significant positive change in the experimental group when compared to the control group. However, it may be that the small sample size, especially that of the control group, mitigated against significant change in the'grade'analyses.

The results reported in Table 4 indicate positive change in the predicted direction for all analyses as measured. However, it seems probable that a larger sample size would be needed to attain statistical significance in visualization and originality criteria for art and writing measures. In addition, the extremely small standard deviations seem to indicate that variability between scores was minimal. Therefore, the absolute range of scale values should be increased from 0-4 to perhaps 0-8 or 0-10.

Table 5 seems to indicate that the writing and art measures should be sensitive enough to detect change. Justification for this, being the significant intra-rater reliability coefficients for the art and writing measures. However, this may not be the case, because although significant, the square of the intra-rater reliability coefficients yields the total explained variance indices of 71%, 38%, 72%, and 38% for each of the measures respectively.

B. Difficulties and Limitations of the Project

Close examination of the procedures and variables in the project reveal that qualifications should be made about the conclusions.

1. Difficulty arises in assessing what the relevant variables were: the materials that were produced, the training that the teachers received in developing imagination

and creativity per se, or the changes in motivation that resulted from their participation in a program which was designed to facilitate creativity. It is difficult to ascertain if the significant change in the experimental group resulted from one of the above factors or some combinations thereof, or some other variable.

2. An additional factor inherent in this project was that there was no attempt made to control or measure the extent of individual rehearsal of the materials by the teachers. Teachers had access to the materials from each section of the program for one week during the inservice course but there was no control over how much time was spent in studying them. During the classroom implementation phase of the project the teachers had access to these materials for as long as they indicated a desire to use them.

3. Since this was a pilot project, and the experimental group was formed post hoc,

there was no attempt made to control for the influence of the differing knowledge and skills that participants brought to the training program prior to its implementation. However, in the evaluation of the actual implementation next year, an analyses of covariance factorial design will be utilized.

4. The effectiveness of the training procedure might be limited to certain kinds of materials and is probably influenced by the cognitive style of both teacher and learner. For example, if a divergent productive child is paired with a convergent productive teacher, this may mitigate against expression of creativity on the part of the child.

5. It is entirely possible that some teachers in the control group engaged their children in creative activities. There was no way to confirm that they remained "non-involved" in using creative activities, though they

did not have access to the particular materials used by the experimental group.

6. Difficulty arises in using teacher judgments as a means of identifying creativity in children. There is considerable variability among teachers in their ability to rate children against a predetermined criterion, even when specific definitions are provided.

7. While this project provides a method for improving imagination and creativity in children, we cannot conclude that the children will continue to function at the same level. This project provides only a concurrent assessment of a child's ability to express himself creatively and not a predictive one.

C. Implications for Further Study

School personnel may wish to use information gathered during this project as a basis for additional investigation in seeking answers to the following questions:

1. To what creative behavioral functions (flexibility, fluency, originality, elaboration) do students respond with increasingly positive or negative performance as they move through the grades?

2. Do overall trends in scores on the TTCT or significant low scores (compared to national norms) at specific grade levels indicate a need for program modifications?

3. Do certain classroom strategies result in low student performance on the TTCT?

4. Is any adjustment needed in program planning and implementation to meet the creative needs of boys as compared to girls?

5. Can the program be equally helpful to students of both low and high intelligence levels?

6. How would the results of this project differ if the teachers participated in an entirely self-instructional program rather than one which combined this with presentation and

guidance by an instructor?

7. What are the specific effects of teacher training sessions and instructional materials on the affective behavior of students and teachers? (The teachers participating in this project commented about attitudinal changes in the children and suggested additional investigation in this area.)

8. In assessing the value of particular activities in developing creative expression in children, what role does teacher direction, guidance, and supervision play? Does it foster the development of creativity more than undirected freedom of action for children?

9. Can the program be adapted for implementation in secondary schools? The program to develop creativity and imagination described in this report appears worthy of implementation in the district's elementary schools. It seems reasonable to predict that under favorable conditions schoolwide implementation of the program might lead to the adoption of many of

> its instructional techniques and materials. It also appears to have considerable potential for application in other elementary school settings. As for application to the secondary school, additional research and study are needed in developing and employing alternative instructional materials. Such a program is currently being planned through a pilot project in the Island Trees Senior High School during the next school year.

Consideration of these and other relevant questions will help influence future planning and development of the program in relation to the entire school program.

VII. PROCEDURES FOR EFFECTING CHANGE

The basic strategy of change that I employed, included the development of program materials (invention and design), and innovation (pilot study), that would prove to be feasible to install. This strategy required an intervention process that placed me in the role of change agent. In this capacity I placed primary emphasis upon establishing lines of communication within the group of teachers, upon the creation of shared perceptions in relation to needs for change, and upon creating desires for change within the group itself. This was done prior to the inception of the inservice training sessions at small group meetings and during the length of the inservice course by interaction within the group.

The basic plan for diffusion of the program's innovative aspects was directed through several avenues.

A. Local Dissemination:

1. Demonstration and Field Testing. To gain district approval and acceptance of this program in training teachers in the use of strategies involving children in activities to release creative expression, it was necessary to demonstrate its effectiveness in

typical classroom situations, under conventional conditions and with formal and informal methods of assessment. Support for testing this model did not come easily as has been explained in the addendum to the Maxi II proposal.

The pilot study was carried out in the Island Trees School District. This approach was utilized because it would more readily legitimize the acceptance process (approval for installation in one or more buildings of the district). I asked central administrators and building principals to look at what was accomplished after the innovation was given a trial and then to decide whether it brought about the desired result.

I sought administrative commitment to have the program systematically and consciously applied within the district's schools so as to avoid its being abandoned at the end of the pilot project. I argued that while it is reasonable to expect some teachers to apply some principles of the program in their classrooms this year, that deliberate application rather than reliance on fortuitous circumstances would ensure implementation of this program in the schools of the district.

B. Regional Dissemination:

I visited the Nassau Board of Cooperative Educational Services (BOCES), the educational facility which could provide regional dissemination and a more sophisticated diffusion process in other geographical areas. The N.Y. State Education Department project grant that supported this program was channeled through BOCES.

In February, 1975, I met with Dr. Mary Flynn, Assistant to the Director of Research and Development of BOCES, and discussed a number of strategies that would help promote inter-institutional diffusion of the program. One immediate approach was a plan to offer the series of training sessions in the autumn of 1975 under the auspices of BOCES Regional Inservice Education Department.

C. Organizational Dissemination and Conference Diffusion:

1. N.Y. State Education Department. I wrote

to Dr. Vivienne Anderson, Director of the Division of Humanities and Arts, briefly describing the program and discussing the possibility of dissemination through regional conferences, workshops or inservice programs. Dr. Anderson forwarded my letter to A. Theodore Tellstrom, Chief of the Bureau of Music Education, who responded indicating an interest in such a design for use at their annual conferences. This is currently in the process of implementation.

2. New York State Science Supervisors Association. Mr. Harold Mahoney, Chairman of the Program Committee of the annual Statewide Conference of the Science Teachers Association of N.Y. State (STANYS), extended an invitation to conduct a workshop in creativity for supervisors scheduled November 2-4, 1975. I have accepted the invitation and will participate in the program.

3. Nassau County Science Supervisors Association (NCSSA). Dr. Jerry B. Davis, President of NCSSA, extended an invitation to make a pre-

sentation on the fostering of creativity in children during the NCSSA Installation Conference in January, 1975, before a group of supervisors. I accepted the invitation and conducted a seminar at the session.

4. Port Washington Public Schools, L.I., N.Y. Dr. Timothy Melchior, Director of Secondary Education in the Port Washington Public School District, extended an invitation to conduct a workshop entitled "Teaching for Creativity" at a curriculum conference in Port Washington. I accepted the invitation and conducted this workshop on February 10, 1975.

5. Educational Testing Service, Princeton, N.J. (ETS). I was one of three Nova University participants to travel to the State Education Department in Albany, N.Y. to be interviewed by Dr. Jack Childress, Vice President of ETS, and Dr. James Hammonds of the Department of Education, Pennsylvania State University. Dr. Childress expressed an interest in my work on Maxi II and a

desire to examine some of the program's descriptive material. I forwarded this material to him January 30, 1975.

6. World Education Fellowship, Society for Educational Reconstruction, and Nassau County Science Supervisors Cosponsored Conference. An invitation to conduct a workshop entitled "The Care and Feeding of Creativity in Children" was extended by Dr. Nasrine Adibe, Conference Coordinator and member of the Graduate School of Education at C.W. Post Center, Brookville, New York, and Dr. Jerry B. Davis of the School of Education, Hofstra University, Hempstead, N.Y. I accepted the invitation and took part in the conference entitled "Mankind in a Changing Environment", at C.W. Post Center on April 19, 1975.

7. Brighton Public Schools, Brighton, Colorado. Dr. Daniel L. Whitacre, Deputy Superintendent of Brighton Public Schools, extended an invitation to send project dissemination material and evaluation documents. I have

responded to his request, indicating what program materials are available and the procedures for possible visitation.

D. Publication:

This report is being prepared for placement in the Educational Research Information Center (ERIC) so that it can be stored and retrieved from this bank of information and made available to educational practitioners through libraries.

E. Employing the Group as Agents for Change:

To be effective, change must be self-generated within the system by the people involved. Among the teacher participants, readiness for introducing and influencing change in others was based on the emergence of a strong group identity, by their apparent internalization of attitudes, behaviors and values that promoted creative expression, and by their sense of importance and significance in terms of what they did.

The five teachers who participated in the inservice program and pilot project agreed to work with practitioners from other levels within the district.

The motivation for using the program, while originally identified with the author, can now be identified with this group within the faculty.

Summary Statement Regarding Change Procedures:

These strategies are being employed to cope with discontinuities that may occur between the planning and development stages and the diffusion and adoption stages. They will provide a bridge between these change stages, coherently linking them together.

APPENDIX

DEVELOPING IMAGINATION AND CREATIVITY IN CHILDREN

by Ira Finkel

Submitted in partial fulfillment of the requirements for
the degree of Doctor of Education, Nova University

Old Westbury Cluster	Maxi II Practicum
Dr. John Borum: Cluster Coordinator	April 25, 1975

APPENDIX

SECTION I	Footnotes Bibliography
SECTION II	Documents Concerning Inservice Course and New York State Education Department Grant
SECTION III	The Torrance Tests of Creative Thinking (Form A Verbal and Figural, Form B Verbal and Figural) and Documents Concerning the Scoring of the TTCT
SECTION IV	Table of Numbers Randomly Selected From a Table of Randomly Generated Numbers Used in the Selection of the Torrance Tests of Creative Thinking to be Scored From the Control Group
SECTION V	Photographs of Samples of Student Drawings from TTCT Form A Figural Pre-Test Randomly Selected From the Experimental Group

SECTION VI	Criteria and Forms Used by Judges in Rating Samples of Student Art and Written Work
	Rating Scores Recorded by Judges on Pre-Program and Post-Program Samples
	Rating Scores Recorded by Judges in Reliability Study of Initial Scores on Art and Written Work
SECTION VII	A Sample Teacher Log and Record of Incidents Plus Photographs of Children Engaged in Creative Activity (Box Construction, Scarecrow Construction) Taken During Classroom Visits. Samples of the Children's Creative Work in Puppetry are Depicted

SECTION VIII Components of the Program Developed by the Author (These Materials Were Delivered by the Author to Mr. Murray Heyert, at Nova University, April 1, 1975)

1. Tapes - Audio Cassettes
2. Teacher Guides - Ideas for Stimulating Creativity
3. Photographs
4. Slide Presentations and Slide Talks
5. 8 mm. Motion Pictures
6. Video Tape

SECTION IX Documents Concerning Project Dissemination

SECTION X Letters From Observers of Maxi II Practicum

APPENDIX

SECTION I Footnotes

Bibliography

FOOTNOTES

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APPENDIX

SECTION II Documents Concerning Inservice Course and New York State Education Department Grant

ISLAND TREES UNION FREE SCHOOL DISTRICT

SEPTEMBER 11, 1974

To: Island Trees School Faculty K-6

From: Mr. Walf H. Oglesby

Subject: In-Service Course: Developing Imagination and Creativity

The following In-Service Course is being offered starting September 24, 1974:

1. Title of Course: Developing Imagination and Creativity
2. Instructor: Mr. Ira Finkel
3. Developing Imagination and Creativity: This course will provide teachers with actual lesson descriptions, techniques and ideas to serve as models for classroom implementation in six areas designed to encourage the development of the creative potential in their children:
   Creative Art, Creative Music, Creative Dramatics, Creative Dance and Body Movement, Creative Games and Toys, Creative Writing.
   Teachers will have access to models of lessons actually given in these areas through prepared guides, audiotapes, movies, videotapes and photographs and will have the opportunity to discuss and practice these during inservice sessions.
   The program is designed to significantly improve the development of imagination and creative performance in children by providing appropriate training experiences associated with the maintenance and growth of skills and techniques of instruction that facilitate imagination.
4. Class will start Tuesday, Sept. 24, 1974, 3:30 to 6:00 P.M.
5. Course will run for 6 weeks - 2 1/2 hours per session, for a total of 15 hours (1 credit will be granted towards salary adjustments)

   Schedule is as follows:

   Tuesdays: Sept. 24; Oct. 1, 8, 15, 22, 29
6. Course is open only to elementary K-6 teachers
7. Classes will be held in the Senior High School Room 218

   Registration blanks are due in Room 222, the M.F. Stokes School, no later than September 20, 1974.

* * *

I wish to register for the "Developing Imagination and Creativity" Inservice Course. I am enclosing my check in the amount of $6.00, Registration Fee. Enrollment is limited to 20 participants. (Make checks payable to: Island Trees Union Free School District).

NAME DATE

SCHOOL GRADE

RE: TEACHERS: Sylvia Bond - Karopczyc
Eunice Lucas - Karopczyc
Eileen Teevan - Karopczyc
Zelda Katz - Karopczyc
Linda Archibald - Sparke

TO: W. Oglesby
FROM: I. Finkel
DATE: 10 - 16 - 74
RE: INSERVICE COURSE

Five teachers who are currently enrolled in the Developing Creativity and Imagination Inservice Course have volunteered to participate in the implementation and study phase of this project. They will be spending over 65 additional hours of study and work as a result of their participation. They will be studying guides (lesson activities) and listening to tapes (35 audio tapes) and will be keeping extensive records of successful activities. They have already pre-tested their children and will be post-testing them in January.

I would like to urge you to consider that each of these five teachers be awarded one additional credit for their voluntary involvement in this project and for the considerable extra homework that they will have to do. I have indicated to them that I would make this request (it originates with me and not them) as I think they are most deserving of this credit.

I would appreciate your consideration regarding this request and hope that it has your support and is approved.

Thank you for your faith in the project and for your assistance.

Sincerely yours,

Ira Finkel

ISLAND TREES PUBLIC SCHOOLS

IN-SERVICE
"Developing Imagination & Creativity"
Mr. Ira Finkel

Period Covered: Sept. 24, Oct. 1, 8, 15, 22 & 29th, 1974

NAME																
.Eileen Greenfield																
.Phyllis M. Cookson																
.Eileen Redican																
.Dorothy Newman																
.Pam Evoskovic																
.Linda Archibald																
.Zelda Katz																
.Eileen Teevan																
.Sylvia Bond																
.Freida Strong																
11. Jane Lally																
12. Eunice Lukas																
13. Ann Shapiro																

TO: I. Carroll

FROM: I. Finkel

DATE: 9 - 12 - 74

This is to confirm my request for the use of Room 218 in the Sr. High School for a period of six weeks (Sept. 24, Oct. 1, 8, 15, 22, 29) for an Inservice Course that I will be giving to elementary teachers.

Thank you for your cooperation.

Ira Finkel

APPROVED

Carroll

~~SEP 21 1974~~

SEP 12 1974

NOTE: NO SMOKING IN RESTRICTED AREAS:
NO BUILDING USE WHEN BUILDING IS CLOSED:
SNEAKERS MUST BE WORN IN ALL GYM AREAS:

S/Y 1974-75
REF: Sr. H.S.
CODE: #8
CHARGE: none

ISLAND TREES PUBLIC SCHOOLS

APPROVAL FOR USE OF BUILDINGS & GROUNDS

September 19,1974
Date

Mr. Ira Finkel
c/o Sr. High School

Dear Mr. Finkel:

Approval has been granted for the following use of buildings:

SCHOOL	ORGANIZATION	WEEKLY/MONTHLY	ROOM	HOUR
Sr. H.S.	Elem. Teachers Inservice	Sept. 24th,	218	3:30pm
	Course	Oct.1,8,15,22,29.		6:00pm

Very sincerely,

F.J. Neist
F.J. Neist

Maintenance Foreman

FJN/ei
cc: Superintendent
Business Office
Principal
Head Custodian
Adult Education
files

(M.P.2)

NYSED MINI-PROJECT PROGRAM

APPLICATION FORMAT

Title of Project "The Care And Feeding of Creativity in Children-
An Inservice Program For Educators"

Project Descriptor 15 Staff Development, 9 Humanities and the Arts,
8 General Education

Person Submitting Project Ira Finkel

Title (English Teacher, Student, etc.) Science Teacher; Teaching Science Dir.

Address Island Trees High School, Straight Lane,
Levittown, New York 11756 Telephone 516 - Pe 1 - 4020

Submit 10 copies of the proposal to the Regional BOCES LEA. The proposal should not exceed one page, and should address only the following points: (in being explicit, I used two pages.)

1. State the educational need to which the project is addressed.
2. Define the problem which the project is attempting to solve. State objectives in specific, behavioral, measurable terms.
3. Describe who is to be involved in the project.
4. Describe the solution you propose, including the activities you will conduct to satisfy the above stated objectives.
5. Indicate what evaluative measures you will use to determine how successfully the above stated objectives will be met. List standard tests to be used, if any, or indicate if you plan to develop your own evaluative instrument.

EDUCATIONAL NEED AND PROBLEM: The Island Trees Schools have done too little to deliberately design curriculum experiences that encourage and develop creativity in youngsters. Emphasis continues to be placed on the cognitive skills rewarding convergent behavior in students while discouraging divergent thinking. The fact is that educators often thwart the release of creative expression and the result is hundreds of students sitting in our classrooms with impoverished imaginations. What compounds this problem is that now, more than ever before, there is a compelling need for schools to turn out men and women who will be frontier thinkers, who can find more adequate solutions to impelling world problems, who can adapt to change and maintain sanity in this age of acceleration. Creativity can be a weapon in coping with life's daily stresses, emergencies and crises. Classrooms can become gift shops with educators developing in children the gift of imagination,which is the springboard for creativity.

SOLUTION AND OBJECTIVES: I will plan,design and develop a packaged program on Creativity consisting of cassette tapes and written activity guides geared for all levels of instruction in the district. This will be used for inservice education of the professional staff. I have selected as the initial target population teachers of grades 4,5,and 6 because research evidence strongly indicates a decrement in creative functioning beginning at the fouth grade level. The program will provide these educators with the requisite knowledge and skills to enlarge their understanding of the nature of creativity and train them in the use of instructional strategies to facilitate creative behavior in their students. Each teacher will receive one packaged program with the materials adaptable for self audio tutorial study. The tapes and guides will consist of instructional techniques in creative thinking, creative writing, creative dramatics, creative art, dance, use of toys, games, sensory awareness exercises, brainstorming, simulations and role playing that will be discussed and practiced by the teachers in seminars and workshops (inservice course). The teachers will use these with their children to elicit behaviors in fluency (developing many ideas), flexibility (shifting frame of reference from one idea to another), originality (developing unusual or uncommon ideas), elaboration (working out details of an idea). Research has identified these as major components of creative behavior.

Instructional Objectives: As the project innovator, I will

- diagnose needs of the professional staff involved in the training program and prescribe appropriate activities
- establish a helping relationship with individual teachers in order to support these teachers as they assume personal responsibility for their own growth of skills and techniques of instruction
- plan and coordinate the dissemination of effective improvements that may result from this project throughout my district (Central Administration advocates this project in the Island Trees School District)
- relate my inservice planning to the total district planning process
- select or create appropriate sequences or combinations of; individual efforts, or small group meetings that will contribute most effectively to the personal development of all concerned
- help individual teachers develop and plan sequences of training experiences associated with the maintenance and growth of skills and techniqu of instruction that facilitate imagination

The teacher will

- initiate the activities and experiences described in this program with his/her students
- use these activities as a basis for developing his/her own set of activities

- draw upon the literature and research in the theory and practice of creativity as provided by the tapes and guides to provide support for his/her individual practice and rationale for his/her actions
- apply his/her knowledge of the theory and practice of creative behavior to the classroom activities he/she has determined to be relevant to the development of imagination in his/her students

The children will

- express their feelings verbally (orally and in writing), and non verbally through dance, art, games and dramatics
- transform themselves into objects, persons, things they are describing
- create characters, action and dialogue from stories, pictures, experiences, or their own imaginations
- describe ways of making toys more fun to play with
- record and describe sensory impressions
- separate sounds and identify them
- with their eyes closed, detect odors
- with their eyes closed, touch and identify different objects
- dance and move to poems read aloud
- walk like different animals or like storybook characters

EVALUATIVE MEASURES: The research design will include the experimental group (classes) and the control group with utilization of pretest and posttest. Tests of creative thinking abilities are useful in making teachers aware of creative potentialities that might otherwise go unnoticed. The Torrance Test of Creative Thinking, a general purpose battery that consists of three non-verbal, figural tasks and six verbal tasks will be used. This battery, with equivalent forms A and B yields scores for fluency, flexibility, originality and elaboration separately for both the figural and verbal tasks. These tests make use of what we know about the nature of the creative thinking processes, the qualities of creative products, the creative personality, and the conditions that facilitate or inhibit creative behavior.
Teacher competency will be assessed by direct supervision and observation by the project director.

INVOLVEMENT: Project designed, constructed, implemented and evaluated by: Ira Finkel: Science Teacher (21 years in district), Teaching Science Director. certified Change Agent trained at TAIC Institute Nassau BOCES, doctoral candidate, teach 11 years in Graduate School of Education at Brooklyn College:"Education of the Gifted Child and Creativity", organized and ran two Superintendent's Conferences on Creativity in Education and Humanities in Education, organized and directed five NSF Summer Institutes for outstanding students, organized and taught six inservice courses in the I.T. District, developed curriculum guides and instructional improvement bulletins for elementary teachers for eight years.

Joseph Orabona: Science Teacher in Island Trees High School will assist in the technical aspects of recording and photography for audio(tapes) and visual(pictures) aspects of the program.

Schedule: Initiate research and develop package July, 1974
Complete package August 1974
Initiate Inservice Program and Self Training Program Oct. 1974
Pretest children Nov. 1974
Implement Program in Classrooms Nov. 1974
Posttest children Jan. 1975 (initiate new group tchrs. Feb.1975)
Final report on findings Mar. 1975

(This project lends itself to the multiplier effect in that it can be disseminated regionally and statewide.

NYSED MINI-PROJECT PROGRAM BUDGET AND FINAL EXPENDITURE REPORT

Title of Project "The Care And Feeding of Creativity in Children-An Inservice Program for Educators" Project # ______

Project Dates July 1974 to Jan. 1975 BOCES LEA NASSAU Project Location Island Trees Levittown, N.Y.

Mailing Address Island Trees High School, Straight Lane, Levittown, N.Y. 11756 Telephone# Pe 1 - 4020

FOR BOCES LEA OFFICE USE ONLY

Activity:Code #	Item	Budgeted	Amount Encumbered	Purchase Order Number	Purchase Order Date	Amount Liquidated	Check Number	Check Date	Balance
Professional Salaries: 210	I.Finkel 150 hours J.Orabona 25 hours	$1500. $ 250.							
Non-Professional Salaries: 215	Typist	$ 70.							
Other Expenses: 240.d	Printing Cassette Containers Tests Scoring Tests	$ 350. $ 80. $ 240. $ 410.							
Travel: 250.2									
Contracted Services: 250.3									
Equipment Rental: 260.3									
Fringe Benefits: 810									
Minor Remodeling: 1220.3									
Equipment Purchase: 1230	cassette tapes, reels	$ 100.							
		Total $3000.00							Total

(Signatures here indicate approval)

Name and title of project director Ira Finkel, District Director;Science Education Ira Finkel Date March 20, 1974
Name and title of applicant's LEA Dr. John Miller. Superintendent of Schools John L. Miller Date March 27, 1974
Name and title of BOCES LEA Nassau BOCES Date ______

(Signature after typewriten name please)

NASSAU COUNTY

BOARD OF COOPERATIVE EDUCATIONAL SERVICES

OFFICE OF THE DISTRICT SUPERINTENDENT OF SCHOOLS

June 15, 1974

Mr. Ernest Valenze (Acting Sup't. of Schools)
Island Trees UFSD 26
Michael F. Stokes Elem. School
Island Trees 3
Levittown, New York 11756

The State Education Department has asked me to undertake the pleasant task of informing you that your proposal(s) entitled "The Care and Feeding of Creativity in Children-An Inservice Program for Educators" has been approved for funding in the amount of $3,000. The duration of the project is to be from July 1974 to June 1975. Your project number(s) is (are) 74-157. Please keep this number on record, as you will need to use it when reporting on your project.

Conditions of the grant are as stated in a BOCES Purchase Order which shortly will be mailed to you by the BOCES Business Office.

Sincerely,

William T. Callahan

William T. Callahan
District Superintendent of Schools

WTC/pah
cc: Richard Burton
NYSED Mini-Project Coord.
Project Director

Encl. Approved project proposal
Instructions for administering the project
Mini-Project final Report Form (M. P. 3)
BOCES Claim Forms (to be returned to as per "Instructions for Administering the Project")

Salisbury Center • Valentines Road and The Plain Road, Westbury, New York 11590 • 516-997-8700

NASSAU BOARD OF COOPERATIVE EDUCATIONAL SERVICES

INTEROFFICE MEMO

TO: Mini-Project Directors

June 18, 1974
MF: # 545

FROM: Mary Flynn Mary Flynn

SUBJECT: 1974-75 Mini-Grant Program

Enclosed is a copy of your approved Mini-Grant proposal together with instructions for administration, a final report form (MP 3), and two Claim Forms.

Please submit the first installment Claim Form to your business manager. He will sign it and forward it to this office for payment. Hold the second installment Claim Form until after submission of five copies of the (MP 3) as per attachment.

First installment Claim Form will be paid upon receipt of a BOCES Purchase Order signed by your superintendent.

If you have any questions or need further clarification, please feel free to contact me (997-8700 ext. 329) or Catherine Serao (997-8700 ext. 351).

NASSAU BOARD OF COOPERATIVE EDUCATIONAL SERVICES
DIVISION OF BUSINESS AND MANAGEMENT SERVICES
SALISBURY CENTER
VALENTINES ROAD AND THE PLAIN ROAD
WESTBURY, NEW YORK 11590
516-997-8700

Date Filed ____
Claim No. ____

Claimant's Invoice No. ____

To Island Trees UFSD, Mr. Ira Finkel
(Print or Type Name of Claimant or Vendor)

Street and Number Island Trees High School, Straight Lane,
(Print or Type)

Post Office Levittown, New York 11756
(Print or Type)

CLAIM

NUMBER ____
(Assigned by Purchase Dept.)

DATE ____

VENDOR NUMBER ____

LOCATION 000 _ _ _ _

YEAR 19 74	ITEMIZATION	UNIT PRICE	NET TOTAL	ACCOUNT CODE
	Remittance Schedule for Mini-Grant			
	ID# 74-157 For $3,000.00			
	1ST INSTALLMENT (75% of total budget)		$2,250. 00	

TOTAL AMOUNT	$2,250. 00
CASH DISCOUNT	
NET AMOUNT	

I HEREBY CERTIFY the above articles were sold and delivered and/or the above service rendered to the Nassau Board of Cooperative Educational Services on the dates and for the prices or amounts billed; that the above bill is just, true and correct; that no part thereof has been paid except as stated therein and that the balance therein stated is actually due and owing, and that the taxes from which the Board of Cooperative Educational Services is exempt are excluded therefrom.

CLAIMANT FURTHER CERTIFIES that the unit prices charged herein are not higher than those charged to any government or commercial consumer for the likeness.

Signature ____ (TITLE)

Print or type name ____

Date ____ 19 ____ (NAME OF COMPANY)

NASSAU BOARD OF COOPERATIVE EDUCATIONAL SERVICES
DIVISION OF BUSINESS AND MANAGEMENT SERVICES
SALISBURY CENTER
VALENTINES ROAD AND THE PLAIN ROAD
WESTBURY, NEW YORK 11590
516-997-8700

Date Filed
Claim No.

Claimant's Invoice No.

To Island Trees UFSD, Mr. Ira Finkel
(Print or Type Name of Claimant or Vendor)

Street and Number Island Trees High School, Straight Lane,
(Print or Type)

Post Office Levittown, New York 11756
(Print or Type)

CLAIM

NUMBER
(Assigned by Purchase Dept.)
DATE
VENDOR NUMBER
LOCATION 000 _ _ _ _

YEAR 19 74	ITEMIZATION	UNIT PRICE		NET TOTAL		ACCOUNT CODE
	Remittance Schedule for Mini-Grant					
	ID # 74-157 For $3,000.00					
	Please attach copies of all receipts, claim					
	forms, district purchase orders, etc.					
	2ND INSTALLMENT (25% of total budget or					
	balance due).			$750.	00	

TOTAL AMOUNT	$750.	00
CASH DISCOUNT		
NET AMOUNT		

I HEREBY CERTIFY the above articles were sold and delivered and/or the above service rendered to the Nassau Board of Cooperative Educational Services on the dates and for the prices or amounts billed; that the above bill is just, true and correct; that no part thereof has been paid except as stated therein and that the balance therein stated is actually due and owing, and that the taxes from which the Board of Cooperative Educational Services is exempt are excluded therefrom.

CLAIMANT FURTHER CERTIFIES that the unit prices charged herein are not higher than those charged to any government or commercial consumer for the likeness.

Signature ....
Print or type name ....
Date .... 19 ....

.... (TITLE)

.... (NAME OF COMPANY)

OFFICE OF THE SUPERINTENDENT OF SCHOOLS

June 26, 1974

MEMO

TO: Ira Finkel

FROM: Richard Morrow, Superintendent

SUBJECT: BOCES Grant for $3,000

At the June 25th public Board meeting, we read into the record the fact that you have received the BOCES grant to develop teacher inservice materials on teaching for creativity and originality. I said then and I say now that you are to be congratulated upon the award and commended for your continued service to the children of this district.

Good show!

Richard G. Morrow

Richard G. Morrow
Superintendent

RGM:MS

APPENDIX

SECTION III The Torrance Tests of Creative Thinking (Form A Verbal and Figural, Form B Verbal and Figural) and Documents Concerning the Scoring of the TTCT

Thinking Creatively With Words

By E. Paul Torrance

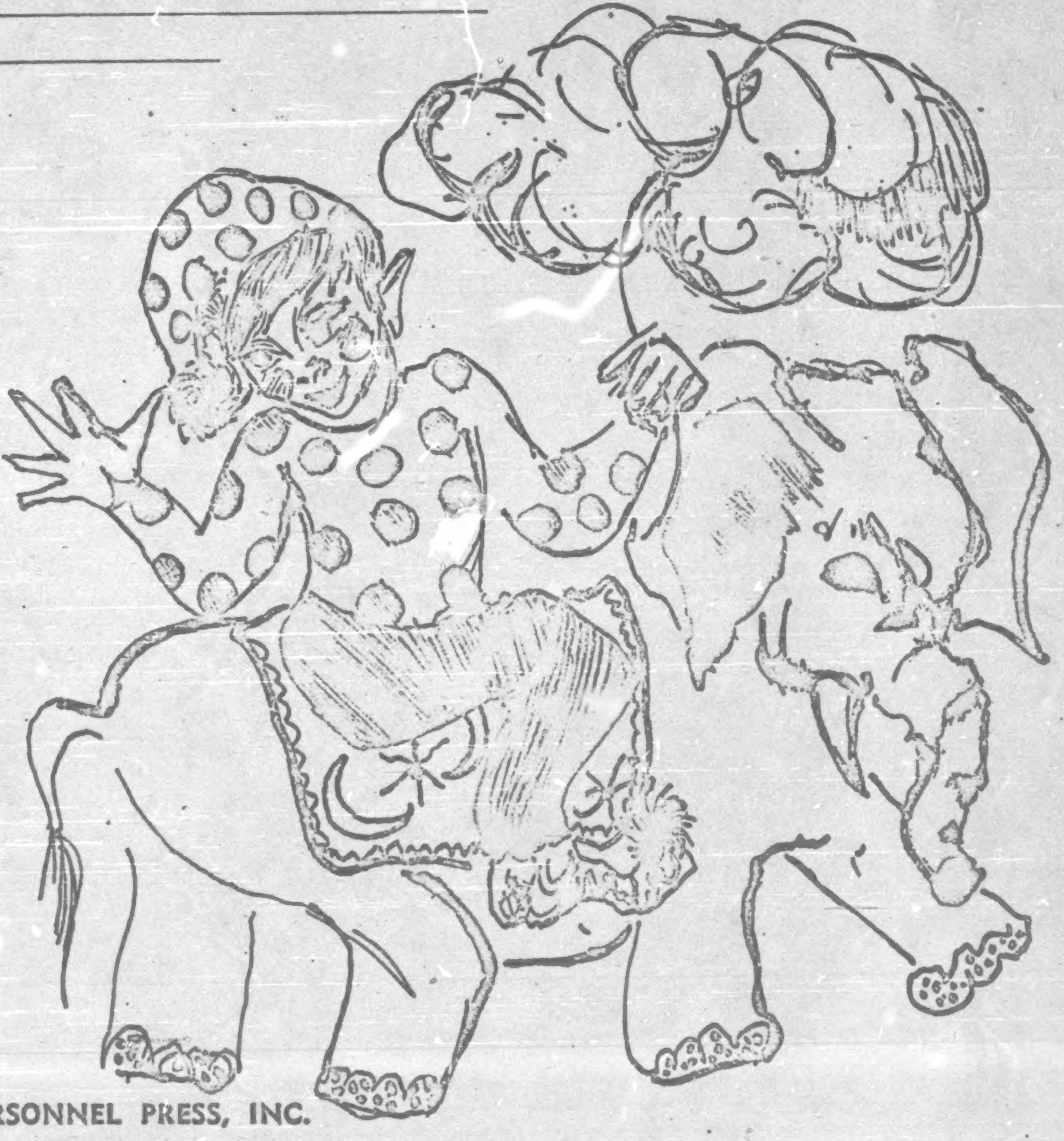
Booklet A

Name ______________________________ Age ________ Sex ________

School ______________________ Grade __________

City ______________________

Date ____________



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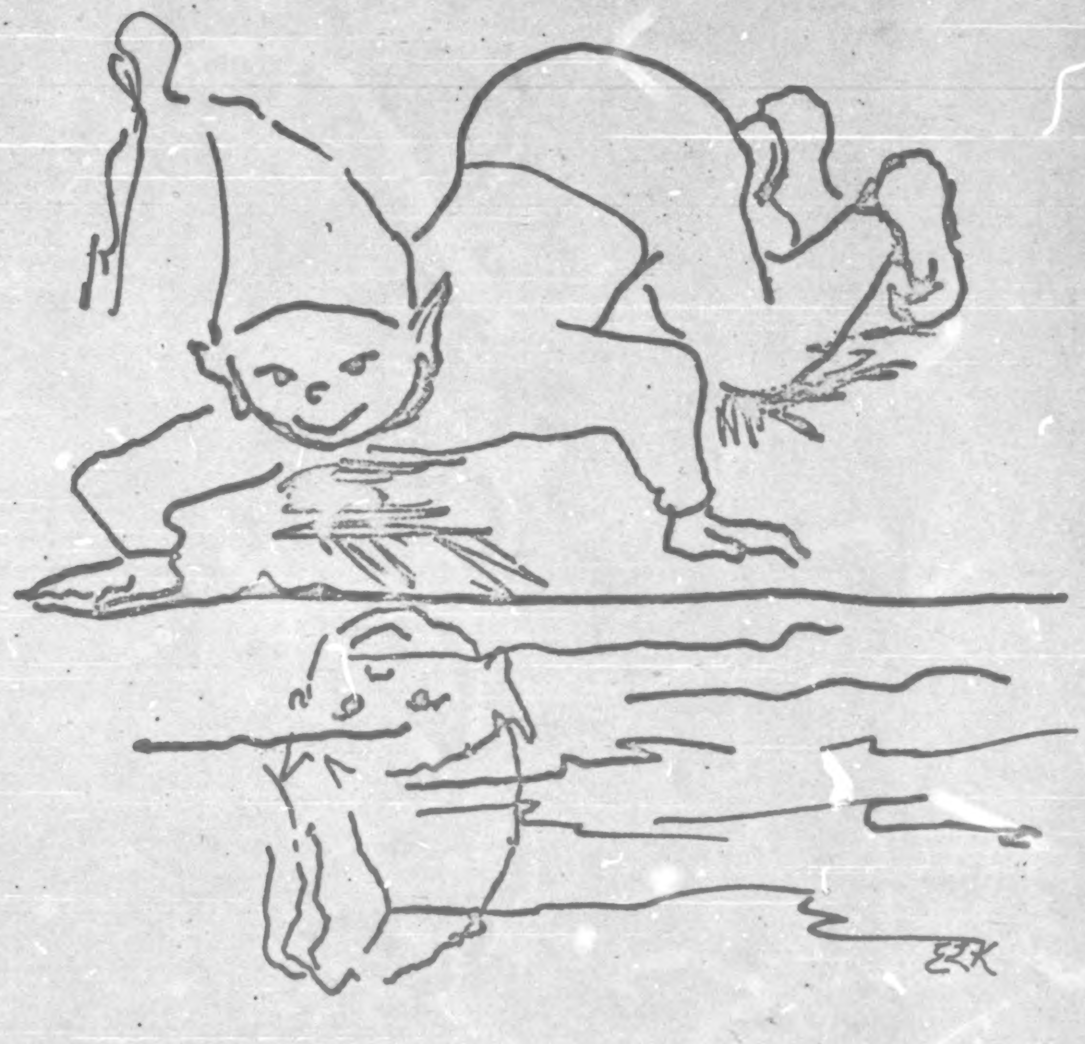
Activities 1-3: ASK-AND-GUESS

The first three activities will be based on the drawing below. These activities will give you a chance to see how good you are at asking questions to find out things that you don't know and in making guesses about possible causes and consequences of happenings. Look at the picture. What is happening? What can you tell for sure? What do you need to know to understand what is happening, what caused it to happen and what will be the result?



Activity 1. ASKING. On this page, write out all of the questions you can think of about the picture on the page opposite this one. Ask all of the questions you would need to ask to know for sure what is happening. Do not ask questions which can be answered just by looking at the drawing. You can continue to look back at the drawing as much as you want to.

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Activity 2. GUESSING CAUSES: In the spaces below, list as many *possible* causes as you can of the action shown in the picture on page 2. You may use things that might have happened just before the things that are happening in the picture, or something that happened a long time ago that made these things happen. Make as many guesses as you can. Don't be afraid to guess.

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Activity 3. GUESSING CONSEQUENCES: In the spaces below, list as many possibilities as you can of what might happen as a result of what is taking place in the picture on page 2. You may use things that might happen right afterwards or things that might happen as a result long afterwards in the future. Make as many guesses as you can. Don't be afraid to guess.

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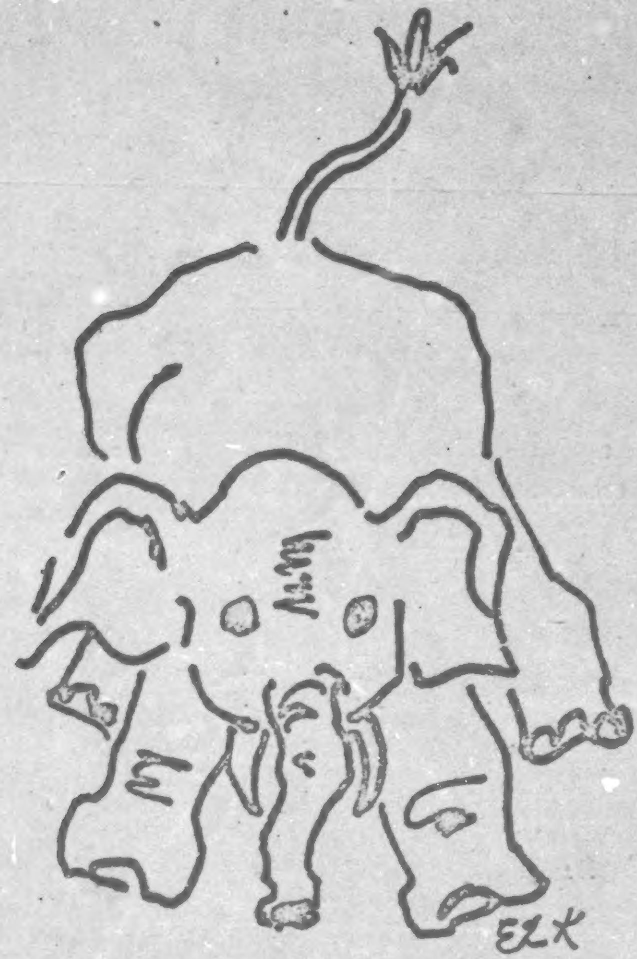
25. ______________________________________

2

Activity 4: PRODUCT IMPROVEMENT

In the middle of this page is a sketch of a stuffed toy elephant of the kind you can buy in most dime stores for about one to two dollars. It is about six inches tall and weighs about a half pound. In the spaces on this page and the next one, list the cleverest, most interesting and unusual ways you can think of for changing this toy elephant so that children will have more fun playing with it. Do not worry about how much the change would cost. Think only about what would make it more fun to play with as a toy.



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Activity 5: UNUSUAL USES (Cardboard Boxes)

Most people throw their empty cardboard boxes away, but they have thousands of interesting and unusual uses. In the spaces below and on the next page, list as many of these interesting and unusual uses as you can think of. Do not limit yourself to any one size of box. You may use as many boxes as you like. Do not limit yourself to the uses you have seen or heard about; think about as many possible new uses as you can.

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Activity 6: UNUSUAL QUESTIONS

In this activity, you are to think of as many questions as you can about cardboard boxes. These questions should lead to a variety of different answers and might arouse interest and curiosity in others concerning boxes. Try to think of questions about aspects of cardboard boxes which people do not usually think about.

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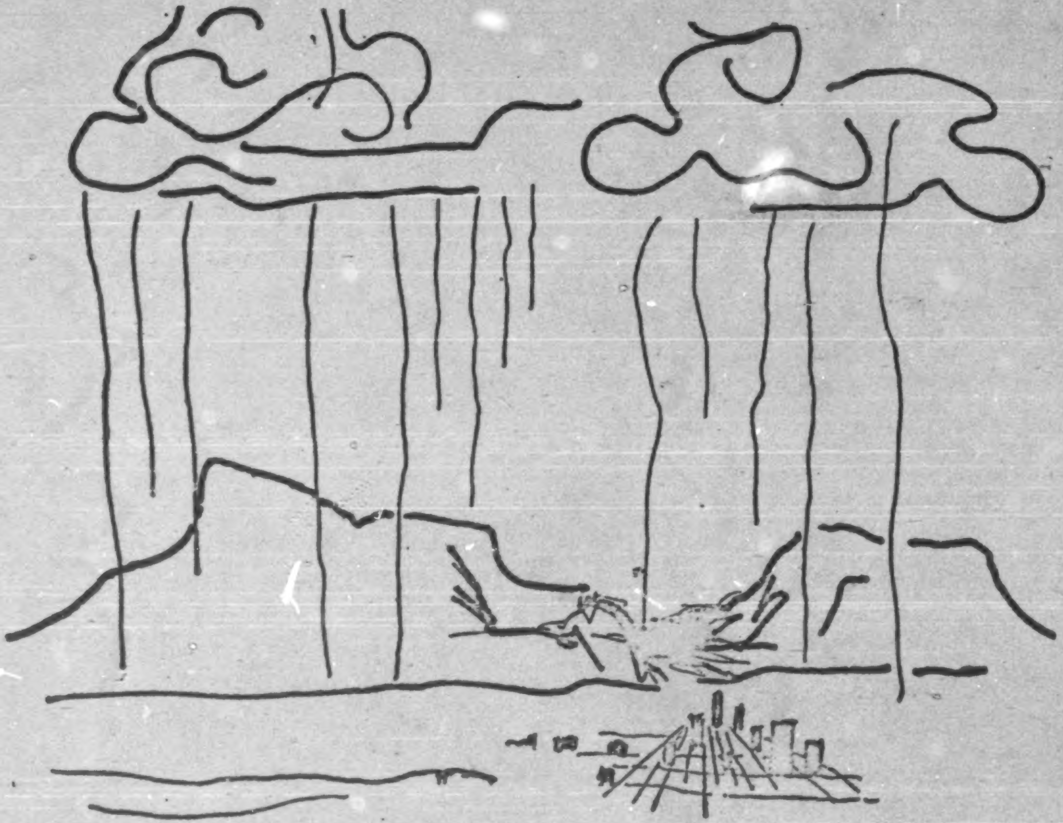
Activity 7: JUST SUPPOSE

You will now be given an improbable situation—one that will probably never happen. You will have to *just suppose* that it has happened. This will give you a chance to use your imagination to think out all of the other exciting things that would happen IF this improbable situation were to come true.

In your imagination, *just suppose* that the situation described were to happen. THEN think of all of the other things that would happen because of it. In other words, what would be the consequences? Make as many guesses as you can.

The improbable situation—JUST SUPPOSE *clouds had strings attached to them which hang down to earth.* What would happen? List your ideas and guesses on the next page.



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Printed in the U.S.A.

EFGHIJK 07654321

Thinking Creatively With Pictures

By E. Paul Torrance

Booklet A

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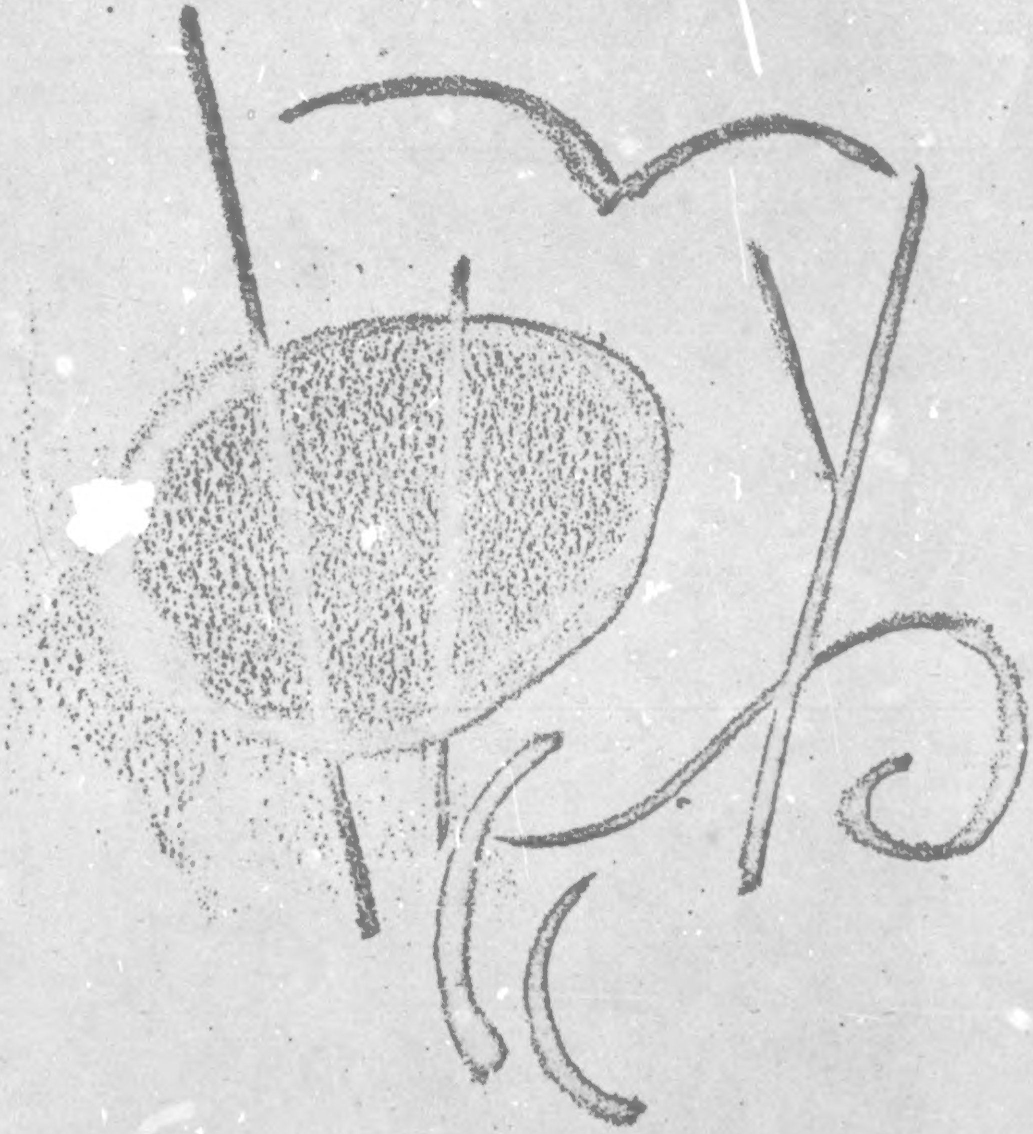
School __________ City __________ Date __________



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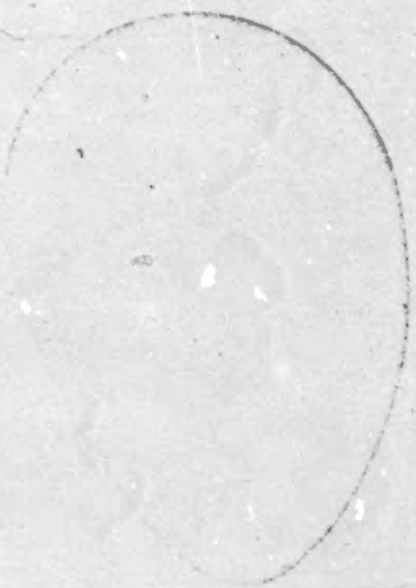
Activity 1. PICTURE CONSTRUCTION

Below is a piece of colored paper in the form of a curved shape. Think of a picture or an object which you can draw with this piece of paper as a part. On the back of these shapes you will find a thin layer of paper that can be peeled away. Look. Now you can stick your colored shape wherever you want it to make the picture you have in mind. Stick yours on the next page where you want it and press down on it. Then add lines with your pencil or crayon to make your picture.

Try to think of a picture that no one else will think of. Keep adding new ideas to your first idea to make it tell as interesting and as exciting a story as you can.

When you have completed your picture, think up a name or title for it and write it at the bottom of the page in the space provided. Make your title as clever and unusual as possible. Use it to help tell your story.



YOUR TITLE:

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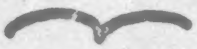
Activity 2. PICTURE COMPLETION

By adding lines to the incomplete figures on this and the next page, you can sketch some interesting objects or pictures. Again, try to think of some picture or object that no one else will think of. Try to make it tell as complete and as interesting a story as you can by adding to and building up your first idea. Make up an interesting title for each of your drawings and write it at the bottom of each block next to the number of the figure.



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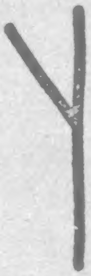

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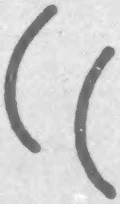

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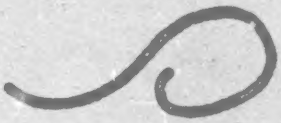

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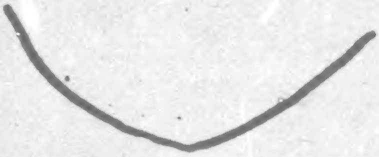

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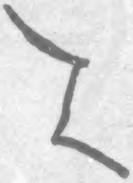

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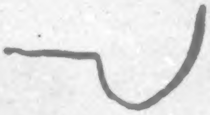

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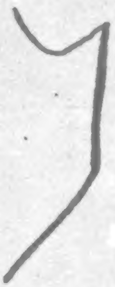

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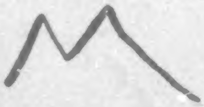

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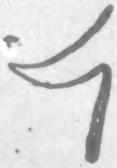

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Activity 3. LINES

In ten minutes see how many objects or pictures you can make from the pairs of straight lines below and on the next two pages. The pairs of straight lines should be the main part of whatever you make. With pencil or crayon add lines to the pairs of lines to complete your picture. You can place marks between the lines, on the lines, and outside the lines—wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or objects as you can and put as many ideas as you can in each one. Make them tell as complete and as interesting a story as you can. Add names or titles in the spaces provided.

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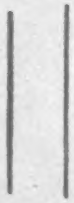

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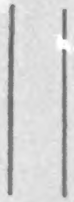

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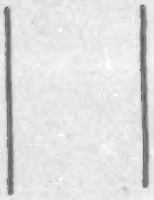

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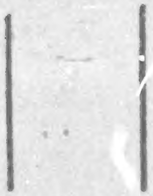

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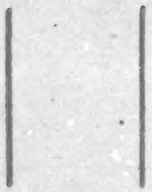

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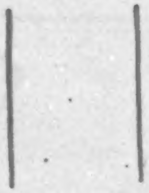

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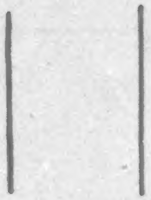

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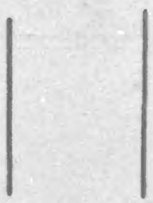

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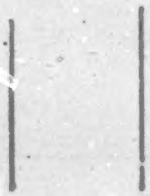

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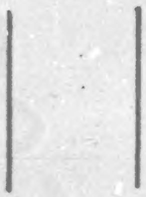

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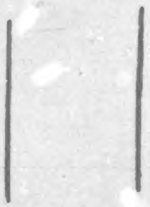

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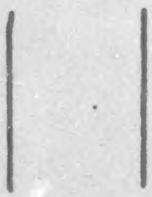

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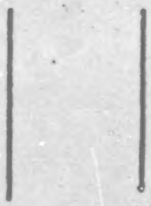

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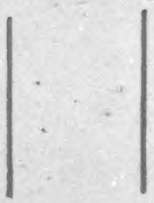

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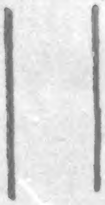

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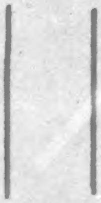

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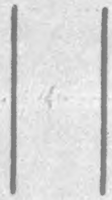

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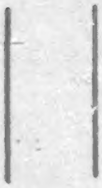

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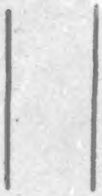

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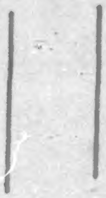

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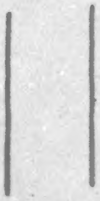

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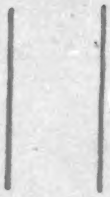

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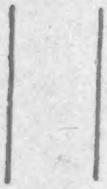

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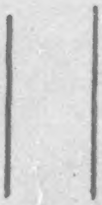

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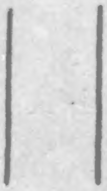

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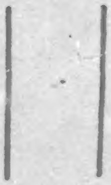

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PRINTED IN USA

Thinking Creatively With Words

By E. Paul Torrance

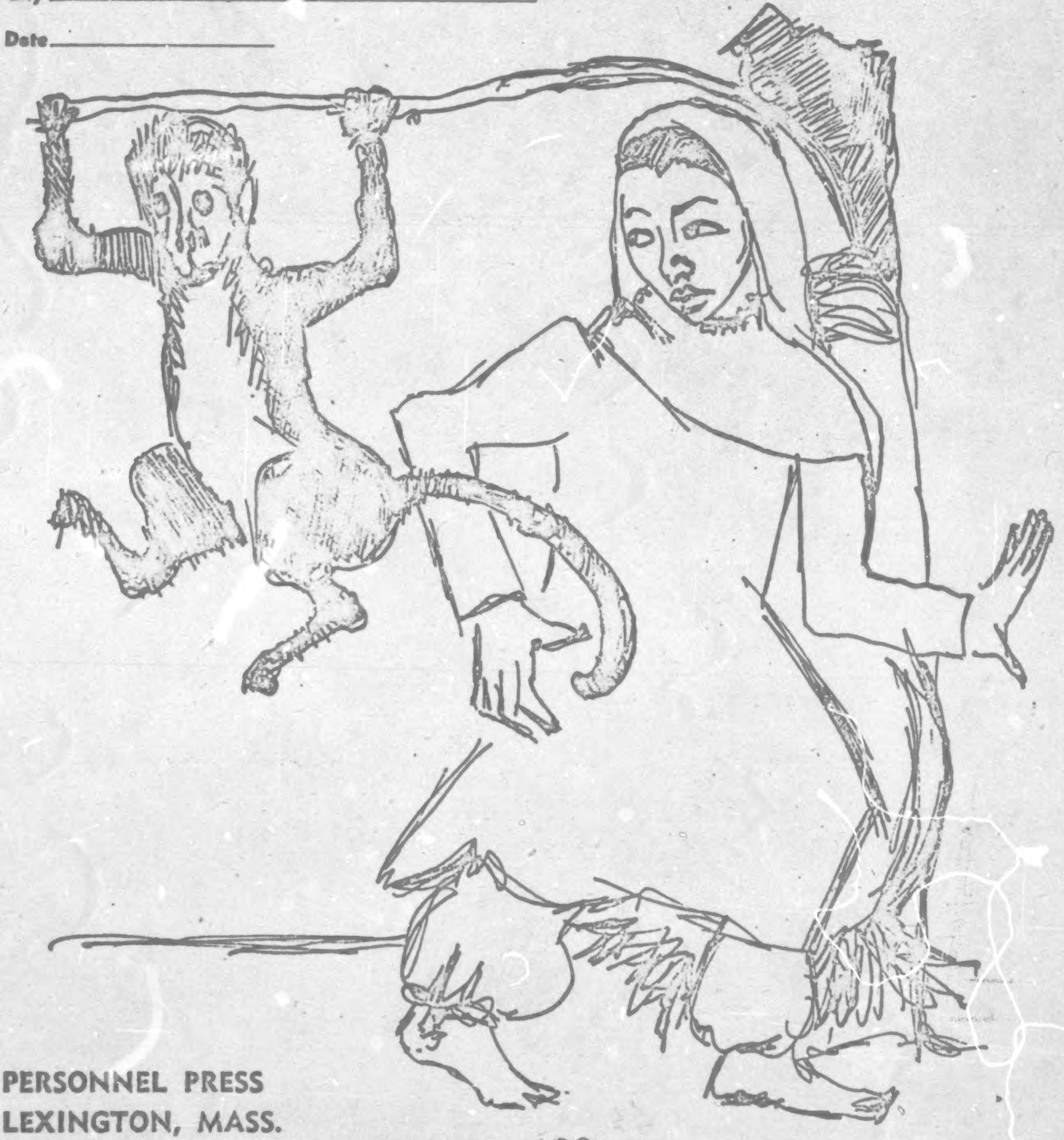
Booklet B

Name ______ Age ______ Sex ______

School ______ Grade ______

City ______

Date ______



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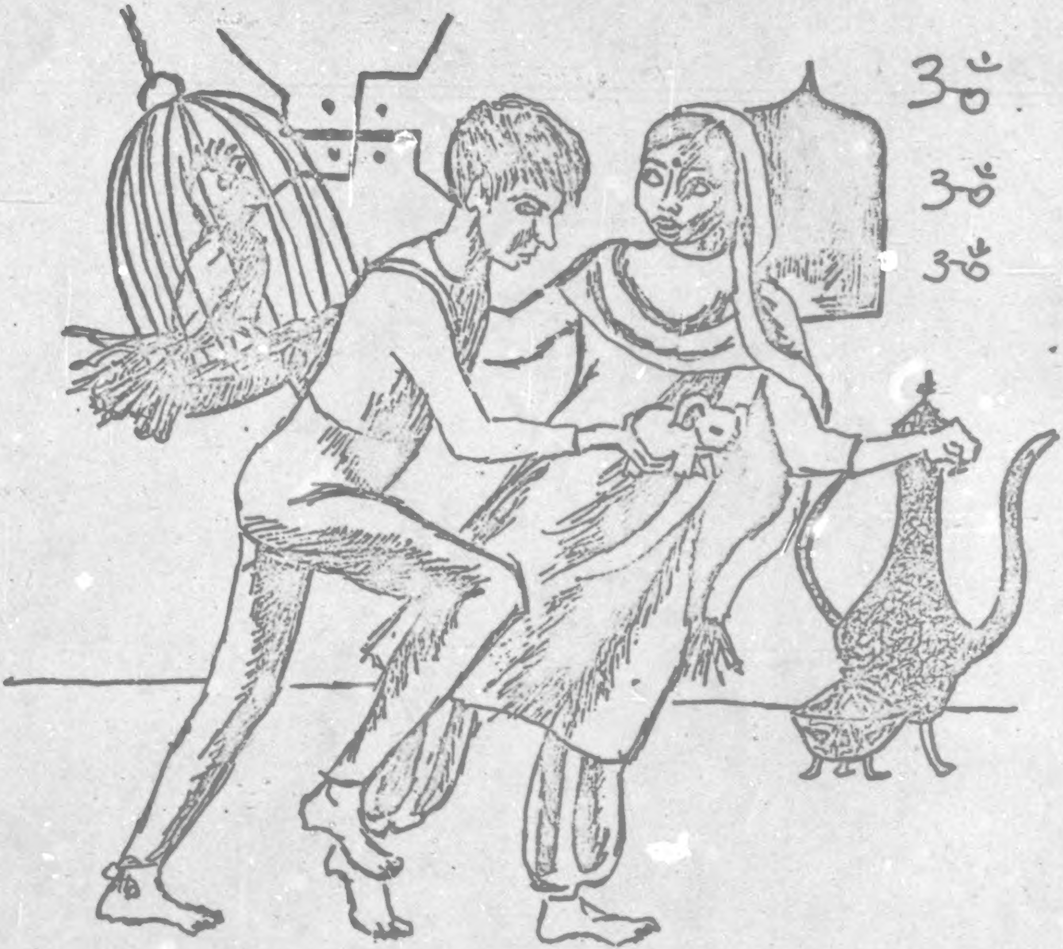
Activities 1-3: ASK-AND-GUESS

The first three activities will be based on the drawing below. These activities will give you a chance to see how good you are at asking questions to find out things that you don't know and in making guesses about possible causes and consequences of happenings. Look at the picture. What is happening? What can you tell for sure? What do you need to know to understand what is happening, what caused it to happen and what will be the result?



Activity 1. ASKING. On this page, write out all of the questions you can think of about the picture on the page opposite this one. Ask all of the questions you would need to ask to know for sure what is happening. Do not ask questions which can be answered just by looking at the drawing. You can continue to look back at the drawing as much as you want to.

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Activity 2. GUESSING CAUSES: In the spaces below, list as many *possible* causes as you can of the action shown in the picture on page 2. You may use things that might have happened just before the things that are happening in the picture, or something that happened a long time ago that made these things happen. Make as many guesses as you can. Don't be afraid to guess.

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Activity 3. GUESSING CONSEQUENCES: In the spaces below, list as many possibilities as you can of what might happen as a result of what is taking place in the picture on page 2. You may use things that might happen right afterwards or things that might happen as a result long afterwards in the future. Make as many guesses as you can. Don't be afraid to guess.

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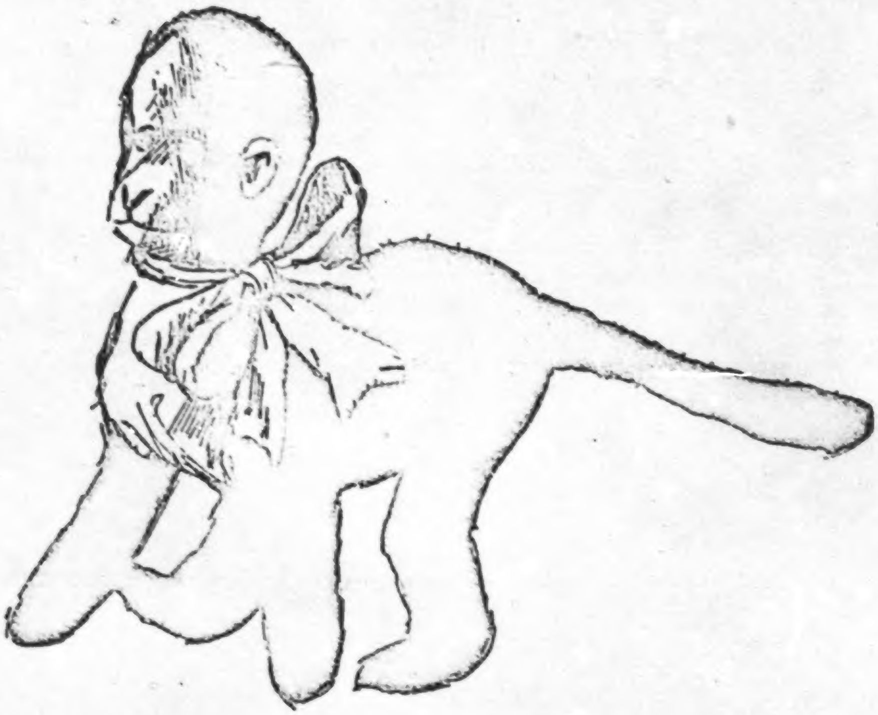
Activity 4: PRODUCT IMPROVEMENT

In the middle of this page is a sketch of a stuffed toy monkey of the kind you can buy in most dime stores for about one to two dollars. It is about six inches tall and weighs about six ounces. In the spaces on this page and the next one, list the cleverest, most interesting and unusual ways you can think of for changing this toy monkey so that children will have more fun playing with it. Do not worry about how much the change would cost. Think only about what would make it more fun to play with as a toy.



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Activity 5: UNUSUAL USES (Tin Cans)

Most people throw their tin cans away, but they have thousands of interesting and unusual uses. In the spaces below and on the next page, list as many of these interesting and unusual uses as you can think of. Do not limit yourself to any one size of can. You may use as many cans as you like. Do not limit yourself to the uses you have seen or heard about; think about as many possible new uses as you can.

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Activity 6: UNUSUAL QUESTIONS

In this activity, you are to think of as many questions as you can about tin cans. These questions should lead to a variety of different answers and might arouse interest and curiosity in others concerning tin cans. Try to think of questions about aspects of tin cans which people do not usually think about.

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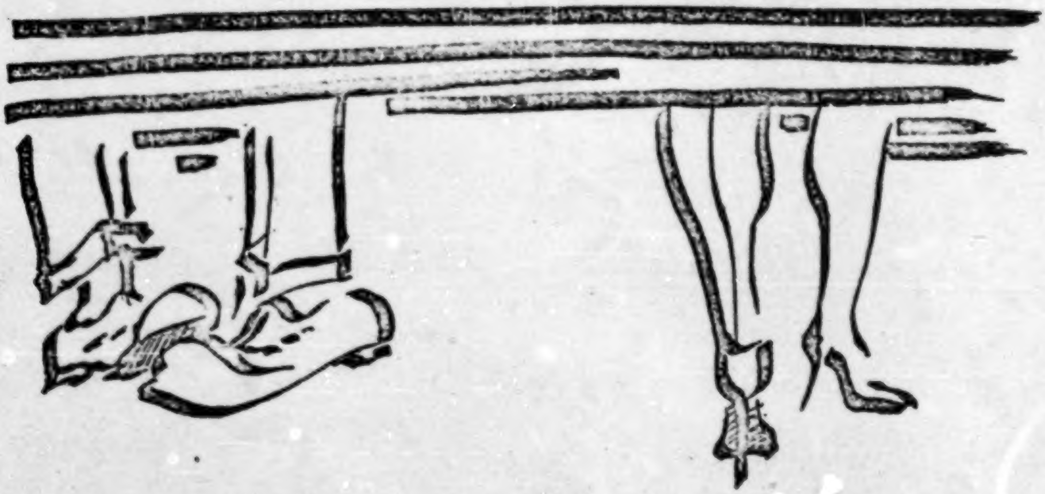
Activity 7: JUST SUPPOSE

You will now be given an improbable situation—one that will probably never happen. You will have to *just suppose* that it has happened. This will give you a chance to use your imagination to think out all of the other exciting things that would happen IF this improbable situation were to come true.

In your imagination, *just suppose* that the situation described were to happen. THEN think of all of the other things that would happen because of it. In other words, what would be the consequences? Make as many guesses as you can.

The improbable situation—JUST SUPPOSE *a great fog were to fall over the earth and all we could see of people would be their feet.* What would happen? How would this change life on the earth? List your ideas and guesses on the next page.



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Printed in the U.S.A.

EFGHIJK 07654321

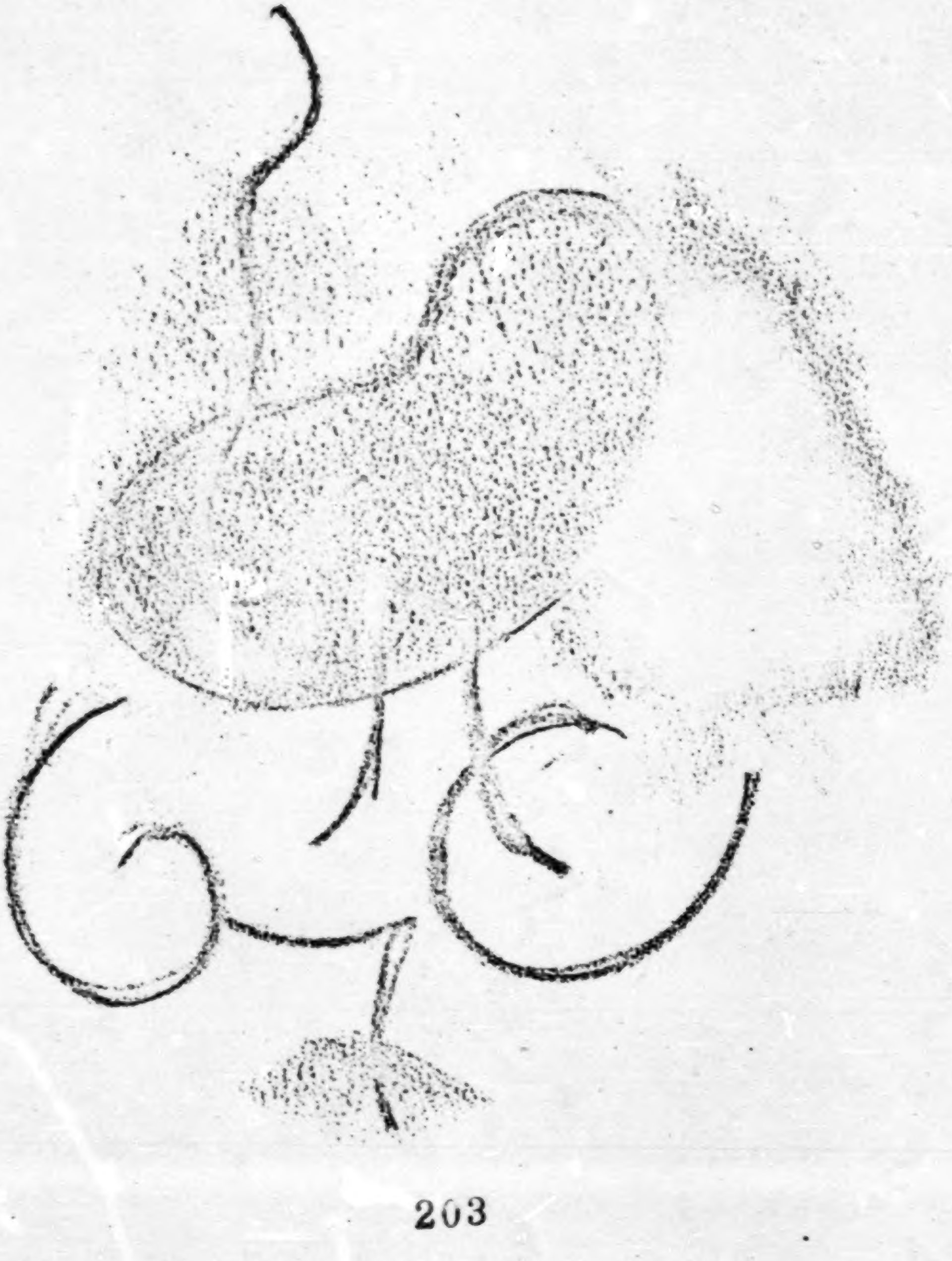
Thinking Creatively With Pictures

By E. Paul Torrance

Booklet B

Name ____________________________________ Age ________ Sex ________ Grade ________

School ______________________ City ______________________ Date ______________



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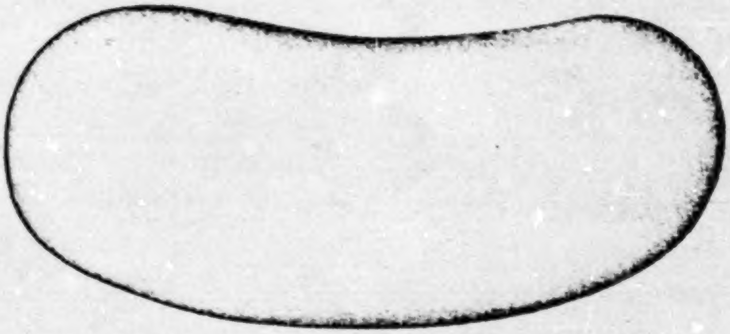
Activity 1. PICTURE CONSTRUCTION

Below is a piece of colored paper in the form of a curved shape. Think of a picture or an object which you can draw with this piece of paper as a part. On the back of these shapes you will find a thin layer of paper that can be peeled away. Look. Now you can stick your colored shape wherever you want it to make the picture you have in mind. Stick yours on the next page where you want it and press down on it. Then add lines with your pencil or crayon to make your picture.

Try to think of a picture that no one else will think of. Keep adding new ideas to your first idea to make it tell as interesting and as exciting a story as you can.

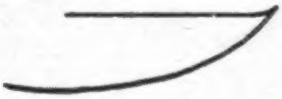
When you have completed your picture, think up a name or title for it and write it at the bottom of the page in the space provided. Make your title as clever and unusual as possible. Use it to help tell your story.



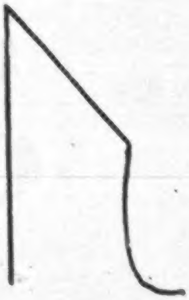
YOUR TITLE: ______________________________

Activity 2. PICTURE COMPLETION

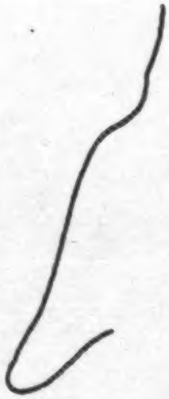
By adding lines to the incomplete figures on this and the next page, you can sketch some interesting objects or pictures. Again, try to think of some picture or object that no one else will think of. Try to make it tell as complete and as interesting a story as you can by adding to and building up your first idea. Make up an interesting title for each of your drawings and write it at the bottom of each block next to the number of the figure.



1.____________________



2.____________________



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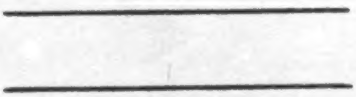
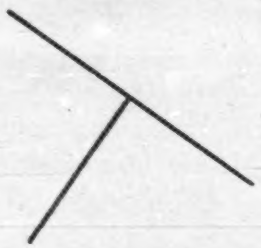
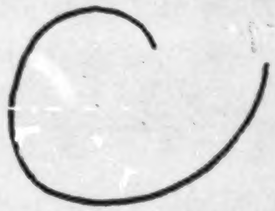


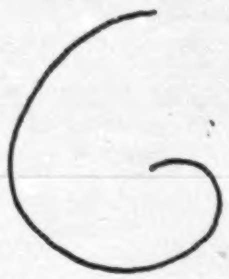
4.____________________



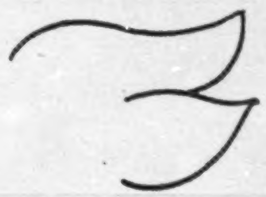
5. ____________________



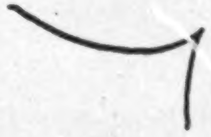
6. ____________________



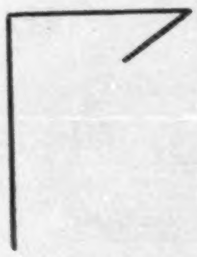
7. ____________________



8. ____________________



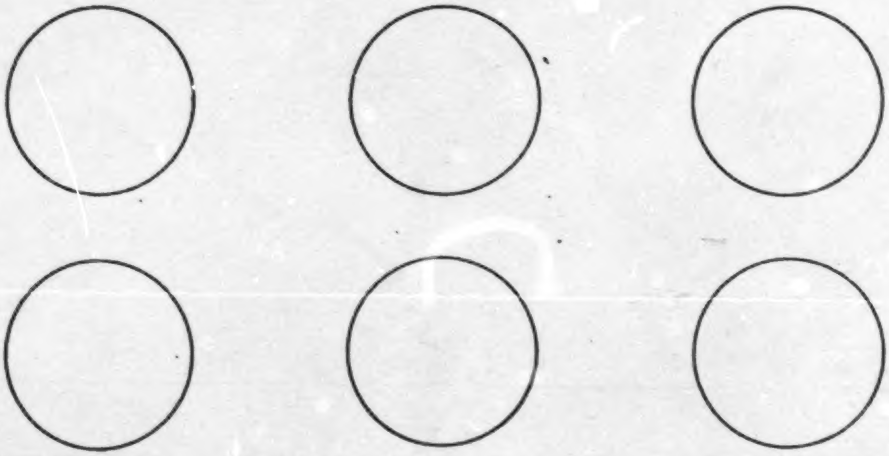
9. ____________________

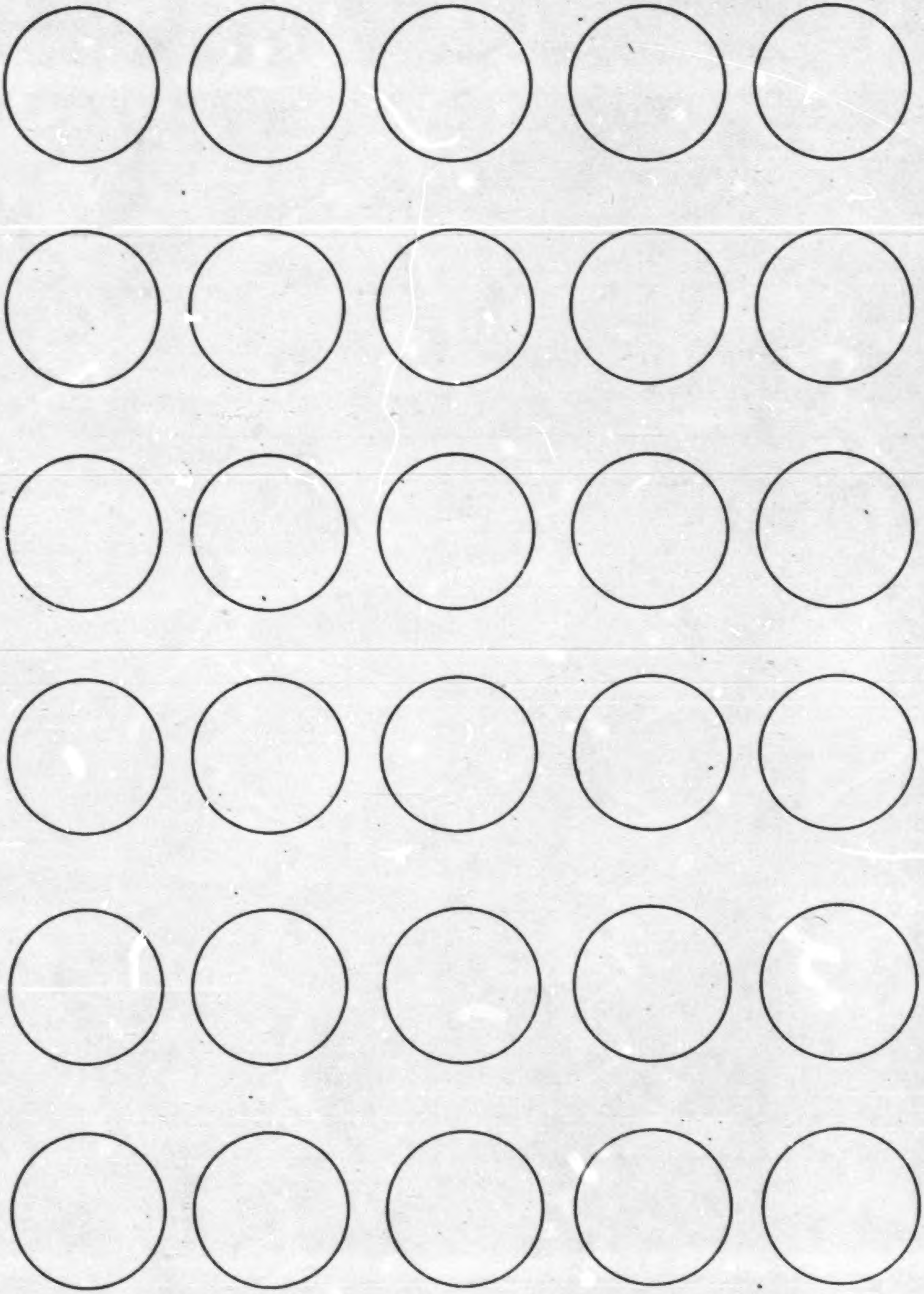


10. ____________________

Activity 3. CIRCLES

In ten minutes see how many objects or pictures you can make from the circles below and on the next page. The circles should be the main part of whatever you make. With pencil or crayon add lines to the circles to complete your picture. You can place marks inside the circles, outside the circles, or both inside and outside the circles—wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or objects as you can and put as many ideas as you can in each one. Make them tell as complete and as interesting a story as you can. Add names or titles below the objects.





PRINTED IN USA

EFGHIJK 07654321

Georgia Studies of Creative Behavior
185 RIVERHILL DRIVE
ATHENS, GEORGIA 30601

2/13/75

Dear Mr Finkel,

Today we received your data for scoring:

26 Verbal Form A

139 Verbal Form B

24 Figural Form A

137 Figural Form B

326

As you can imagine, this is an extremely busy time of year for us. Because of the backlog of data we are now facing, it may be from three to five weeks before we can complete the processing of your data. However, you can be assured that every effort will be made to maintain our high reliability of scoring in returning your data as soon as possible.

Thank you for your order. We are looking forward to doing business with you again in the future. If we can be of any further service, please let us know.

Sincerely,

K. Bradley Frost

K. Bradley Frost
Personnel Press Scoring Service

Georgia Studies of Creative Behavior
185 RIVERHILL DRIVE
ATHENS, GEORGIA 30601

October 11, 1974

Mr. Ira Finkel, District Director
Science Education
Island Trees High School
Straight Lane, Island Trees 6
Levittown, N. Y. 11756

Dear Mr. Finkel:

Thanks for your letter of October 8, 1974. We shall be on the lookout for the tests that you have sent for scoring. We should be able to provide prompt service both now and in January.

Best wishes for the success of your project! It sounds very exciting.

Sincerely,

E. Paul Torrance

E. Paul Torrance, Head
Department of Educational Psychology

Personnel Press

191 Spring Street
Lexington, Massachusetts 02173
Telephone: (617) 861-1670

XEROX

January 23, 1975

Mr. Ira Finkel
Island Trees High School
Straight Lane 6
Levittown, N. Y. 11756

Dear Mr. Finkel:

You have our permission to reproduce for your own use a small supply of Torrance Tests of Creative Thinking, Figural Form A. We are granting this permission so you can accomplish your testing although Form A is momentarily out of stock. We appreciate your ethical behavior in calling the reproduction matter to our attention.

I have already placed the order for the additional tests you requested. They will arrive as soon as possible.

Your continued interest in TTCT is appreciated here. Please call us any time we can be helpful.

Yours truly,

R. N. Walker

R. N. Walker
Manager

rnw/bf

ISLAND TREES HIGH SCHOOL

STRAIGHT LANE
ISLAND TREES 6,
LEVITTOWN, N. Y. 11756
PErshing 1-4020

1 - 20 - 75

Robert N. Walker
Manager,
Personal Press
191 Spring St.,
Lexington, Mass. 02173

Dear Mr. Walker;
Pursuant to our telephone conversation on 1-17-75 I am writing you to thank you for permission to use the xeroxed copies of the Torrance Tests of Creative Thinking.

You were kind enough to indicate that you would forward a letter to me granting me permission to xerox the TTCT and to use them. Since Dr. Torrance will be scoring these, you also stated that you would forward an explanatory letter to him to clear the way for scoring these copies.

I appreciate your flexibility and your cooperation in helping me out in regards to this project. If you could expedite the shipment of the additional 50 copies of the Verbal and Figural Tests Form B, I will be able to use them with the already available tests that I purchased previously.

Sincerely yours,

Ira Finkel

Ira Finkel
District Director:
Science Education

ISLAND TREES HIGH SCHOOL

STRAIGHT LANE
ISLAND TREES 6,
LEVITTOWN, N. Y. 11756
PErshing 1-4020

1 - 20 - 75

Dr. E. Paul Torrance
Georgia Studies of Creative Behavior
185 Riverhill Drive
Athens, Georgia 30601

Dear Dr. Torrance;
Thank you for the scoring service that you did for us on the TTCT Verbal and Figural Forms A in November 1974. As you may remember, I indicated to you at that time that we would be shipping TTCT Figural and Verbal Forms B for scoring sometime in the early part of the new year.

I am sending this letter to reconfirm that you will be receiving these tests sometime in February 1975. I will ship under separate package by February 15 and would appreciate your early attention to this request for scoring.

I recently spoke with Mr. Robert Walker, Manager of Personal Press in Lexington, Massachusetts and have gotten clearance from him to xerox some copies of the pre-test form A Figural and Verbal. I will be including these for scoring along with the regularly purchased copies of the Post test Form B. Mr Walker stated that he will send you a letter explaining that he has given approval for my use of these xeroxed tests and that it is alright for scoring.

Thank you for your previously provided prompt service.

Sincerely yours,

Ira Finkel

Ira Finkel
District Director:
Science Education

Georgia Studies of Creative Behavior
185 RIVERHILL DRIVE
ATHENS, GEORGIA 30601

January 23, 1975

Mr. Ira Finkel, District Director
Science Education
Island Trees High School
Straight Lane, Island Trees 6
Levittown, N. Y. 11756

Dear Mr. Finkel:

Thanks for your letter of January 20th.!

We look forward to receiving your posttests for scoring shortly after February 15th.

Sincerely,

E. Paul Torrance

E. Paul Torrance, Director

Georgia Studies of Creative Behavior
185 RIVERHILL DRIVE
ATHENS, GEORGIA 30601

Dear Mr. Finkel,

Today we received the TORRANCE TESTS OF CREATIVE THINKING that you sent us for scoring. The booklets will be assigned immediately to one or more of our trained scorers and will be returned to you as soon as the work has been completed. The scoring process, however, is a human one and usually requires two weeks for assignment, scoring, quality control checking, and the like. Thus far, we have never taken longer than three weeks and we shall try to maintain this record.

Sincerely,
E. Paul Torrance
E. Paul Torrance, Director

APPENDIX

SECTION IV Table of Numbers Randomly Selected From a Table of Randomly Generated Numbers Used in the Selection of the Torrance Tests of Creative Thinking to be Scored From the Control Group

HOFSTRA UNIVERSITY

Hofstra University

HEMPSTEAD, LONG ISLAND, NEW YORK 11550

SCHOOL OF EDUCATION
Department of Educational Psychology

Table of randomly generated numbers, to be used in the assignment of subjects to a control group, in the Island Trees Creativity Training project.

Class # 1

5, 12, 17, 3, 9, Alternates 8, 10, 11

Class # 2

8, 13, 12, 4, 6, Alternates 17, 9, 2

Class # 3

5, 7, 13, 1, 11 Alternates 3, 6, 8

Class # 4

18, 21, 16, 15 24 Alternates 4, 23, 13

Class # 5

17, 12, 9, 3, 23 Alternates 7, 11, 6

Jp 1/28/75

Table of numbers randomly selected from a table of randomly generated numbers used to select the tests to be scored from the control group.

Class # 1 Ms. C. Grade 4

5, 12, 17, 3, 9, Alternates 8, 10, 11

Class # 2 Ms. B. Grade 4

8, 13, 12, 4, 6, Alternates 17, 9, 2

Class # 3 Mr. K. Grade 5

5, 7, 13, 1, 11, Alternates 3, 6, 8

Class # 4 Ms. R. Grade 5

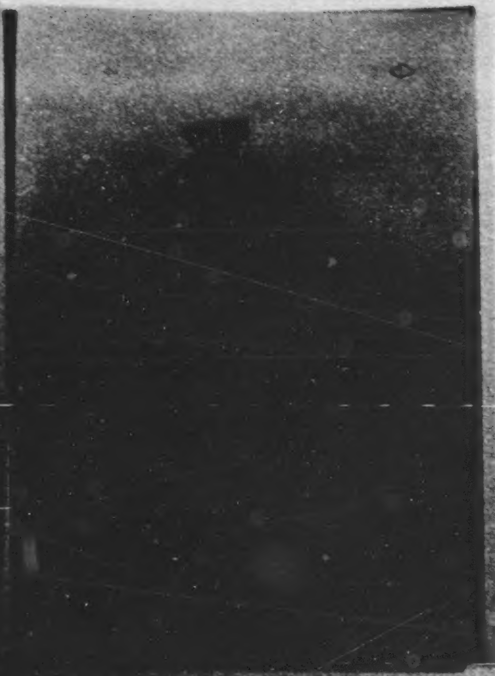
18, 21, 16, 15, 24, Alternates 4, 23, 13

Class # 5 Mr. C. Grade 6

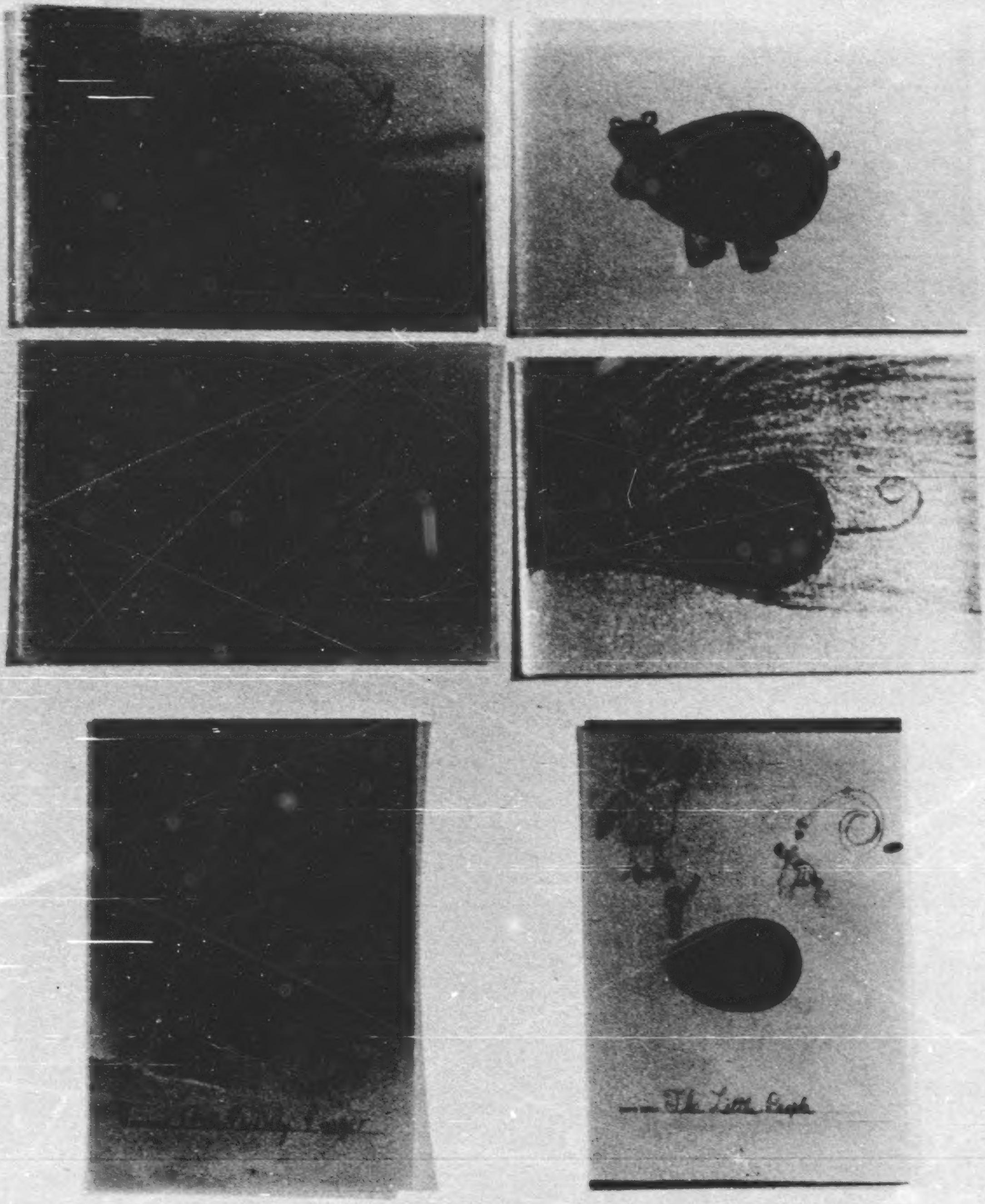
17, 12, 9, 3, 23, Alternates 7, 11, 6

APPENDIX

SECTION V Photographs of Samples of Student Drawings from TTCT Form A Figural Pre-Test Randomly Selected From the Experimental Group



122



APPENDIX

SECTION VI

Criteria and Forms Used by Judges in Rating Samples of Student Art and Written Work

Rating Scores Recorded by Judges on Pre-Program and Post-Program Samples

Rating Scores Recorded by Judges in Reliability Study of Initial Scores on Art and Written Work

Art and Writing Criterion:

Visualization: How much the child visualizes when he/she draws and or writes.

Whether they work with words or with art materials, creative individuals apparently almost always have the gift of producing visual images and other sensor equivalents of the experience, feeling, or emotion they are describing.

The power to translate these images into artistic or written expression was selected as a criterion of creative ability. The use of picturesque speech to suggest a scene, and the use of color and form to generate a definite mood and feeling are examples of this ability.

In evaluating each work for visualization, the judge asked:
Was the work vivid, lively, intense, vigorous, fresh? Did it stir emotionally? Did it graphically convey emotions and feeling?

Originality: Creative individuals apparently can synthesize different elements in an unusual and imaginative way.

In evaluating each work for originality, the judge asked:
Did the work have an original setting, form, design, or plot? Was a fresh point of view explored? Was the idea and composition catchy, surprising, providing an unusual twist rather than a stereotyped presentation? Did the work display an individuality and versatility of style?

Rating Scale: The written work and art work was rated on a scale of 0 - 4

0 if the quality under consideration is absent.
1 if the quality under consideration is at a low level or is poorly expressed.
2 if the quality under consideration is present but is neither strikingly evident or poorly expressed.
3 if the quality under consideration is definitely present and is more evident and better expressed.
4 if the quality under consideration is at a high level and is strikingly evident and highly noticeable.

Creative Writing

Random Selection of 25 Samples From Experimental Group
Ratings Awarded by Judge of Creative Writing

	25 Pre Program Samples		25 Post Program Samples	
	Criterion		Criterion	
Student	Visualization	Originality	Visualization	Originality
1	2	3	2	2
2	1	0	1	1
3	2	4	3	3
4	2	2	3	3
5	1	1	2	2
6	2	1	3	1
7	4	3	4	4
8	3	1	2	2
9	2	1	2	3
10	1	4	2	4
11	2	2	2	3
12	1	1	2	2
13	3	2	2	4
14	4	4	4	3
15	1	1	3	2
16	1	3	1	2
17	2	3	4	4
18	3	2	3	3
19	2	1	3	1
20	4	2	2	4
21	3	4	2	4
22	2	2	3	3
23	1	1	1	2
24	1	2	4	3
25	3	3	1	2

Creative Art

Random Selection of 25 Samples Brom Experimental Group)
Ratings Awarded by Judge of Creative Art

	25 Pre Program Samples		25 Post Program Samples	
	Criterion		Criterion	
Student	Visualization	Originality	Visualization	Originality
1	3	3	3	1
2	0	2	4	4
3	2	1	2	2
4	3	1	2	2
5	1	1	1	1
6	2	2	1	1
7	3	2	1	3
8	4	4	4	3
9	1	3	3	3
10	2	1	4	4
11	2	3	3	2
12	1	1	2	3
13	1	1	3	3
14	3	4	2	2
15	3	3	0	2
16	1	3	4	3
17	2	1	2	1
18	2	2	3	4
19	1	2	1	1
20	4	3	4	3
21	4	2	1	2
22	1	1	2	2
23	4	2	4	4
24	2	1	3	3
25	1	1	1	2

Creative Writing

Random Selection of 25 Samples From Experimental Group
Ratings Awarded by Judge of Creative Writing

Student	25 Pre Program Samples				25 Post Program Samples			
	Criterion				Criterion			
	Visualization		Originality		Visualization		Originality	
	Rating 1	Rating 2	Rating 1	Rating 2	Rating 1	Rating 2	Rating 1	Rating 2
1	2	3	3	3	2	2	2	2
2								
3	2	2	4	3	3	2	3	2
4								
5								
6								
7	4	4	3	3	4	4	4	4
8								
9	2	2	1	2	2	2	3	3
10								
11								
12								
13	3	2	2	3	2	1	4	4
14								
15								
16								
17	2	2	3	3	4	3	4	4
18	3	3	2	2	3	2	3	3
19								
20	4	4	2	3	2	2	4	4
21								
22	2	1	2	2	3	3	3	1
23								
24	1	1	2	1	4	4	3	3
25								

For Reliability of Ratings Awarded by Judge of Creative Writing
(Judge was asked to rate the above randomly selected samples without reference to the first rating)

Creative Art

(Random Selection of 25 Samples From Experimental Group)
Ratings Awarded by Judge of Creative Art

Student	25 Pre Program Samples				25 Post Program Samples			
	Criterion				Criterion			
	Visualization		Originality		Visualization		Originality	
	Rating 1	Rating 2	Rating 1	Rating 2	Rating 1	Rating 2	Rating 1	Rating 2
1	3	3	3	2	3	3	1	1
2								
3	2	3	1	1	2	3	2	3
4								
5								
6								
7	3	3	2	2	1	1	3	3
8								
9	1	1	3	3	3	3	3	2
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13	1	1	1	2	3	2	3	3
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16								
17	2	3	1	1	2	2	1	2
18	2	2	2	1	3	3	4	3
19								
20	4	4	3	3	4	3	3	3
21								
22	1	1	1	1	2	2	2	2
23								
24	2	2	1	2	3	3	3	2
25								

For Reliability of Ratings Awarded by Judge of Creative Art
(Judge was asked to rate the above randomly selected samples without reference to the first rating)

APPENDIX

SECTION VII A Sample Teacher Log and Record of Incidents Plus Photographs of Children Engaged in Creative Activity (Box Construction, Scarecrow Construction) Taken During Classroom Visits. Samples of the Children's Creative Work in Puppetry are Depicted

TEACHER LOG -- A SAMPLE

I really am unconcerned as to what the Torrance Test will show.

My own observations have convinced me that my children and their teacher are more creative because of the extra thought and effort that have gone into each day.

I have always prided myself on not following a text book and calling that the curriculum. I have, since my first year in Island Trees, 1968, thought about how I could make the work more satisfying and have the children enjoy coming to class.

But, concentrating as we have on creativity has made a difference - and for the better.

I have consciously thought every day of how I could do what I was doing better - more creatively.

True, I have delightful children. Not all are able, but as a whole it is a thoroughly enjoyable class. Yet they were not particularly creative in September.

I can say, however, that new projects please them now. They go about trying things energetically rather than ask questions in worried tones.

Yes - they have benefited and so have I!

Construction

Children brought in all sizes and shapes of cartons which we heaped in the center of the room.

Children could take their box if they wished and use any others they liked.

Results were stupendous. The creativity of the children in putting these boxes together made me appreciative of their talents since I could never have achieved such results.

Never have I seen the children lose themselves to such an extent in an activity.

The sounds were wonderful - happy voices, cooperation, laughter, and pleasure at the result.

Apple Dolls

We had visited the Bethpage Restoration.

Children drew what they had enjoyed most and began to bring in apple dolls - wiz apples that wizened as the weeks went by but whose dress gave an indication as to the figure -- man, woman, boy, girl.

The clothes were generally pieces of cloth stapled or sewn together with large clumsy stitches. The results were really good and quite imaginative.

A Logo

I asked the children to pretend that they owned a store or a business.

How would they advertise their product or store?

The children's "Logos" were truly creative. We enjoyed looking at all of them and then spoke about the fact that many had exaggerated the worth or value of what they had to sell.

Would it therefore not be a good idea to be wary of "big promises?"

Pantomime

Instead of the usual type of review in social studies, I asked the children to get into committees and work out a skit illustrating an area we had worked on in social studies. No words were to be used.

The results were disappointing. The children, for the most part, were silly and the situations forced.

It is evident that the children need much more experience in this kind of activity.

Diorama

Children were given two months to prepare a report on some topic in the social study book that interested them.

They then had to construct a diorama illustrating a point made in their reports.

The results, by and large, showed imagination.

Designing a Book Cover for the Book Read

We never write book reports. That is so deadly and children can fake it so easily.

Since I require that a book be read every week, we do our reports orally, and the children may ask the child giving the report a question that easily reveals the reader's knowledge or lack of it.

As a change, I asked the children to design a cover for the book that gave the spirit of the story.

Some were trite, but most were quite professional.

How Did You Feel This Morning?

I asked the children to write six words describing how they felt when they woke up that morning.

The children were anxious to convey their feelings. There were few questions and little hesitation.

When they were finished, I read them aloud - no names, of course.

The children laughed and we remarked how similar mostly all the feelings were.

I felt sad that the day started so badly for the children and we talked about ways we could improve our mornings.

In the discussion we agreed that perhaps too many of us, teacher included, did not get enough rest and had to go to bed earlier.

For those of us who were angry, nervous, sad, and unhappy, we talked about what we could do to rid ourselves of these feelings. We agreed that, in some cases, we could do little, but in other cases we could, by certain actions, improve our home situation so that our lives and those around us could be happier.

Perhaps the most significant aspect of this activity for me was the shocking revelation of how unaware I was of many of the children's true feelings.

Even if these "morning blues" wore off, I have tried to think of what I perhaps do unwittingly that cause part of the children's anxiety.

Dramatizing the Bill of Rights

I did not want the children to learn the Bill of Rights by rote.

They broke up into committees and chose one of the Bills they wished to dramatize.

After acting out the episode, the children attempted to guess the Bill just enacted.

The children made props, costumes, and did such an excellent job that the viewers and I guessed at once what the actors had portrayed.

Children were loose about this. If anyone was self-conscious, I was unaware of it.

Almost everything we do in a creative sense is more free and spontaneous. The children don't look at each other for encouragement or appear puzzled as to what is expected.

They are not afraid to fail and are willing to try almost anything I or the others suggest.

Pretend You're an Animal or Anything Else You'd Like to Be

Better than average results. Susan has a stepmother who is a teacher from Turkey and very busy getting American accreditation.

Susan's real mother has been in several mental institutions.

Her composition, "The Little Pussy Cat," showed me how starved she is for affection.

Bonnie draws and talks about babies all the time - here, too. I don't know the significance, but I'll talk to Dr. Liebowitz about it if the excessive interest doesn't subside.

Famous Artists

I filled a large bulletin board with about 40 pictures done by great artists.

Although one child wanted to know why Norman Rockwell wasn't up there, and others couldn't decide for a while which picture they wished to select, the activity gathered steam as the children "lived" with the pictures.

I had asked the children to select their favorite picture and then research the artist.

By the time we took the pictures off, the children had a nodding acquaintance with Renoir, Degas, Goya, Rembrandt, David, Toulouse Lautrec, Gaugin, Van Gogh, Winslow Homer, George Bellows, and Monet. In fact, they were able to spot Rembrandts and Renoirs in other pictures even when the artists' names were concealed.

I wanted very much to introduce the children to the great art and my expectations were more than realized.

Begin a Story

and have someone else finish it.

Great fun. The children put more than the usual amount of effort into this activity and the results were delightful.

Bulletin Board in Hall

Each class does a bulletin in the corridor once during the year.

I suggested the theme "Wake Up World, There's Work to be Done" but the children themselves discussed what the problems of the world are, how some might be solved, and drew pictures to point up what they considered the biggest problems to be.

They wanted the following concepts to be pointed out:

Hunger
Peace
Inflation
Recession
Disease
Prejudice
Love
Pollution
Crime
Fear

The children discussed each of these over a period of two weeks plus others we didn't have room on the bulletin board to discuss.

Their grasp of world problems was perceptive and I feel helped by the fact that children report on a current event each week.

The creative manner in which they tackled the bulletin board, however, was largely due to the many creative projects we have undertaken this school year.

Yes - No

The children could only use "yes" or "no" but were to use varied tones of voice and could use gestures.

Moderately successful. Obviously need to work a great deal in dramatizing different situations.

Record on Sounds

We listened to a record on the sounds of the city. The children enjoyed it and then I asked them to write about the sounds in their homes.

I am so sorry that I didn't save them. Some made me cringe.

With great alacrity they wrote and their compositions portrayed an atmosphere in which the children live. For some, most of the sounds were happy. For others, one knew before but now was certain that the child lived in an atmosphere of discord and strife.

After I had read them aloud, minus the names of course, I asked them how much, perhaps, did they contribute to the discordant sounds.

Most of the children felt that with effort they could make their homes have happier sounds.

Interviews

The children were asked to phone someone they knew, ask for an appointment, and interview them on the kind of work they did.

Interviewing and reporting are not easy tasks. Nevertheless, one of the stipulations was that they not interview anyone who lived in their home.

The children found this a difficult but satisfying assignment.

Many skills were employed. We discussed how one asks to be seen - not barges in. We discussed proper and improper questions. (Don't ask how much money someone earns or how old they are.)

The Saddest or Happiest Day of My Life

I want the children to be in touch with themselves so to speak and a great deal of the creative writing we do leans toward that goal.

In this topic, the results were beautiful. Strangely enough, the children wrote more frequently about the most unhappy day of their lives rather than the happiest.

"My Ideal Day"

Catherine is a sensitive, bright child who would sit in front of her paper for half an hour with barely a sentence written.

As I started to collect the papers, she invariably would begin to get something down and show a sense of panic at having been so slow in expressing herself.

For this topic, she looked at me, smiled, and her pencil flew.

She has recopied her paper for you. There were a few errors which I could have ignored, but, since I never grade creative writing just point up errors - never too many so that the children are demoralized, I thought it better to turn in her corrected paper.

May I say, at this point, that the children enjoy having me go over their papers with them. They sit or stand at my desk and discuss how improvements can be made. All of this is done in an informal manner and if I haven't called as yet on a child so that their creative writing can be gone over, they remind me that they have not as yet had a turn at my desk.

I always did a great deal of creative writing but never more than this year. Now, even the slowest student gets interesting thoughts down and has no reluctance in expressing himself.

Exam Questions That Made The Children Think More Deeply

If you had lived during the Revolutionary period would you have been a patriot or a loyalist? Explain.

Pretend you are a Southerner during the Civil War.

Write to a friend in England explaining the reasons you and your family are fighting the war.

You are an Indian on a reservation. Explain to a newspaper man why you feel the white man has been unfair to your people. Have the reporter point out why the white man is angry with the Indians.

How do you think you would feel if you were black.

No one will judge you. Simply write about your prejudices.

These statements and questions have been part of discussions and tests.

We have had agreements and arguments but, most important, the children have seen that almost any question has two sides.

This is just a sampling of the kind of thing we have done. No one falls asleep when these discussions take place and we have stressed that seldom is there perfect agreement on a question in a democracy. What is important is that we listen courteously.

The Day I Was Proud of Myself

In trying to develop a good self concept, I asked the children to write about this topic.

This was a difficult assignment. So many of the children found it difficult to think of even one thing they could think of which was laudable.

I worked individually with the children trying to jog their memory.

There were still a few at the end of 30 minutes who still were unable to think of an event they could recall with pride.

Decided I had to help the children build themselves up more.

The secure, happy children wrote voluminously!

Junk Sculpture

I showed the children some of Picasso's marvelous construction pieces.

To my surprise a number of children within the next few weeks made pieces of their own.

Even those who did not would find an interesting stone or piece of glass and tell me it would be good for junk sculpture.

In other words they are beginning to be more sensitive to shape, color, and form.

Sports Magazine

Danny is very, very slow with a poor self concept of himself.

He is, at Dr. Liebowitz's suggestion, in charge of a sports magazine.

Some of the slower children feel more comfortable in a "sports" milieu, and I expect that while the magazine may not be a superior piece of work, many of the children who do not excel will take great pride in having a part in this venture through writing or drawing.

Hobby Show

We are going to have a hobby show.

Not every child has a hobby, that is apparent, but rather than preach about less T.V., perhaps a more effective approach would be to interest the children in something that will give them pleasure so that T.V. is not so essential.

I have foreign stamps for those who would like to try stamps. In addition, if this catches fire, we can stay one afternoon a week for 20 minutes or so for the purpose of trading or swapping. Possibly lunch time and free time during the day will be sufficient but if not we can share after school.

The Indians

As I mentioned previously, the Indians have been part of our discussion quite often during our social study periods.

In studying South America, we discussed the contributions of the Indians there and I then thought of that remarkable woman in our district who now heads the cafeterias.

She is South American and part Indian. In addition, she traveled down the Amazon River in her youth with guides and went where no white woman ever was before.

She is talking to us Wednesday, November 26, 1974, and showing us slides and actual momentos of that trip.

In addition, our play in May will revolve around the American Indian and Mrs. Gelardi, who is an expert in that field, will help us to learn their dances and songs.

I hope that by the time school is dismissed in June, my class will think of the American Indian in terms more in keeping with historical fact than the Westerns in movies and T.V.

Playing Tha Stock Market

We have not done this yet because we have just completed the subtraction of fractions but now I will give each child the imaginary magnificent sum of $350.

They will bring in the stock market pages and they may purchase $350.00 worth of stock.

This is to be written out carefully in their notebooks and each week we will see whether our stock has gone up, down, and by how much.

Have done this once before and is an effective way of making fractions meaningful.

Ordering Merchandise From a Real Catalogue

Writing letters can be a bore. For Christmas, the children brought in their own Sears, Roebuck, Penny's, Montgomery Ward, etc., catalogues.

They were given 50.00 imaginary dollars to spend for their families.

A regular business letter was required. The children gained in vocabulary and spelling by looking through the catagogue and, of course, arithmetic also had to be used.

This was a successful blending of many skills which the children enjoyed.

The children then had to write another letter the following week complaining about a wrong order - certainly a necessary skill these days!

Writing a Friendly Letter

Children get this terribly confused because it generally is so meaningless.

We had real people, addresses and envelopes with a stamp to use - and I mailed the letters.

Grandparents, aunts, uncles, and cousins were surprised and delighted. The children in no time flat really learned the proper form of a friendly letter.

My Brother Stevie

We have an unusually fine English book which has a great deal of literature in it that is excellent.

"My Brother Stevie" is about a black family and has a humor and pathos that holds one's interest.

The children had a new slant on Negro life from this story. I followed this with the story of Harriet Tubman prior to our going to Hofstra to see a play about her life.

I explained to the children that I, too, am often afraid of Negroes, but that there are many who deserve and have earned our respect.

We discussed Negroes who have left their mark for good on American life and hopefully the children will not see each negro as a worthless person.

I might add that while discussion is an invaluable tool, I find getting the children's attention by reading a high interest piece of writing on something I want them to think about,very effective.

RECORD OF INCIDENTS - A SAMPLE

Teacher______________________ Grade___________ Date_______

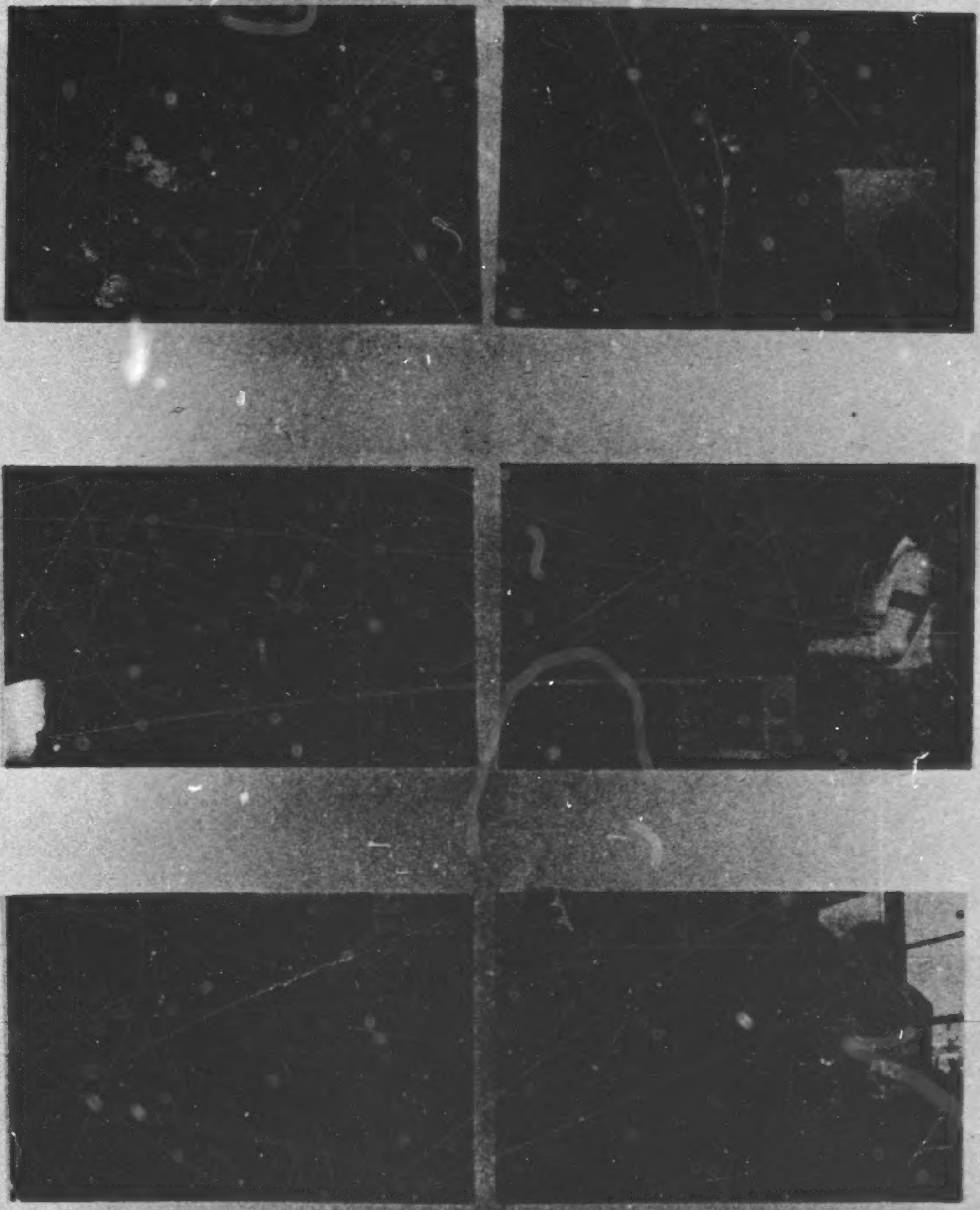
Description of incidents in which children involved themselves in creative behavior and expressed original ideas.

Creative Activity	Date
Art construction with boxes	9/24/74
Creative Art based on field trip	9/27/74
Built apple dolls	10/3/74
Operated a store	10/10/74
Pantomimed a story	10/15/74
Constructed dioramas	10/17/74
Designed a book cover	10/22/74
Wrote a story	10/24/74
Dramatized the Bill of Rights	10/29/74
Did Creative Writing to Music	10/31/74
Pretended they were animals	11/5/74
Began a story	11/7/74
Ended a story	11/8/74
Designed and constructed hall bulletin board	11/12/74
Dramatized different situations	11/14/74

Creative Activity	Date
Did creative writing to sounds of the city	11/19/74
Held mock interviews	11/21/74
Wrote songs	11/26/74
Created compositions about each other	12/3/74
Wrote "The saddest and happiest day of my life"	12/5/74
Pretended they were other people and wrote stories	12/10/74
Described "The day I was proud of myself"	12/11/74
Built a junk sculpture	12/17/74
Made a sports magazine (wrote it and drew it)	12/18/74

Creative Activity	Date
Held a hobby show	12/24/74
Wrote letter to a corporation	1/7/75
Wrote letter to a friend	1/9/75
Illustrated a story	1/13/75
Made water color paintings	1/14/75
Danced to poems	1/16/75
Wrote and illustrated advertisements for products	1/20/75
Described and acted out feelings	1/21/75
Drew political cartoons	1/23/75
Drew Valentine cards	1/24/75
Taped poems in various rhythms	1/27/75
Made a Thesaurus	1/28/75

Creative Activity	Date
Drew pictures using different shape objects	1/29/75
Built scarecrows	1/30/75



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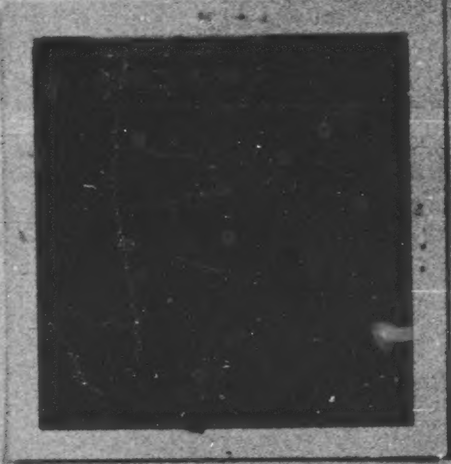

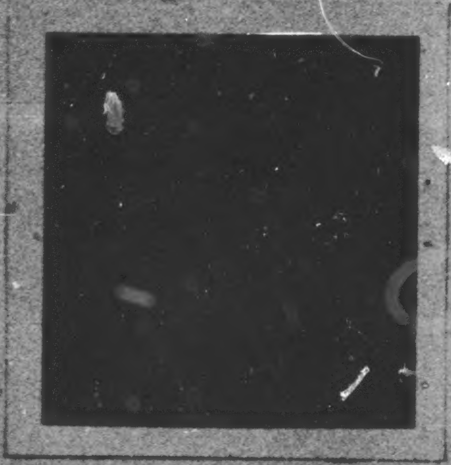

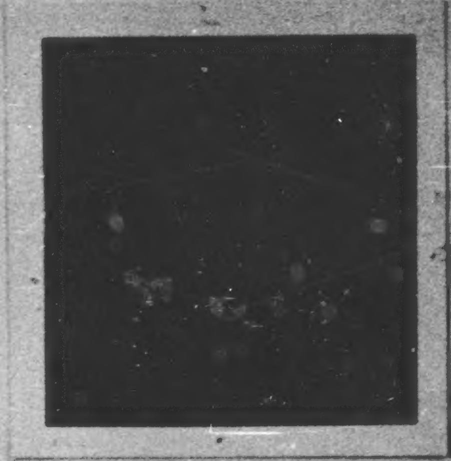

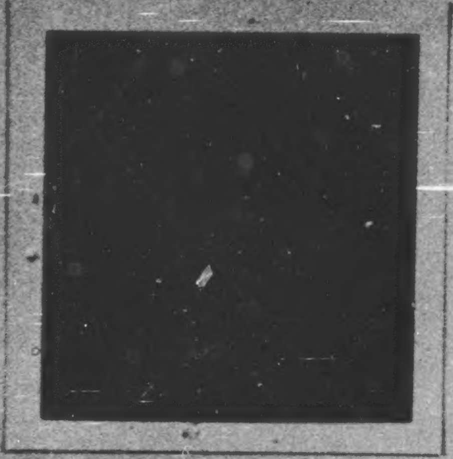

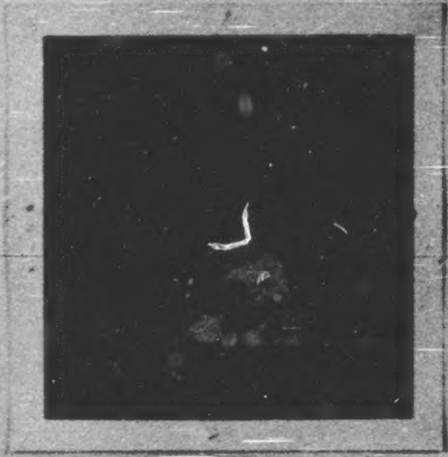

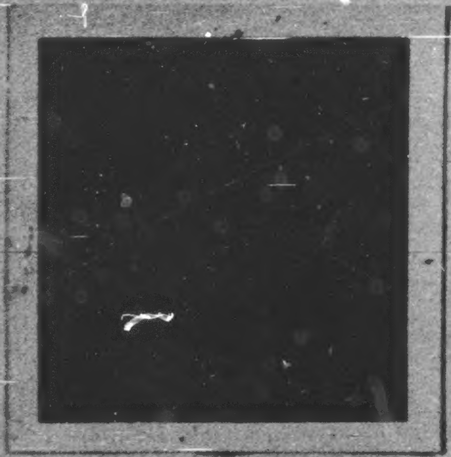

APPENDIX

SECTION VIII Components of the Program Developed by the Author (These Materials Were Delivered by the Author to Mr. Murray Heyert, at Nova University, April 1, 1975)

1. Tapes - Audio Cassettes
2. Teacher Guides - Ideas for Stimulating Creativity
3. Photographs
4. Slide Presentations and Slide Talks
5. 8 mm. Motion Pictures
6. Video Tape

APPENDIX

SECTION IX Documents Concerning Project Dissemination

Nassau County

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DIRECTOR OF PUBLICATIONS

BERNARD MC FADDEN
3790 Regent Lane
Wantagh, New York 11793

October 1, 1974

Ira Finkel
Island Trees High School
Straight Lane
Levittown, New York 11756

Dear ~~Mr. Finkel:~~ Ira

Thank you for offering to conduct a workshop on "The Care & Feeding of Creativity on Children" during our Spring Conference.

As soon as the details of our Conference are worked out, I will get in touch with you.

Sincerely,

Jerry

Jerry B. Davis
President

JBD/lp

NATIONAL SCIENCE SUPERVISORS ASSOCIATION AFFILIATE

Nassau County
Science Supervisors Association

December 9, 1974

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DIRECTOR OF PUBLICATIONS

Mr. Ira Finkel
Island Trees High School
Straight Lane
Levittown, N.Y. 11756

Dear Ira:

As you know our Association is planning a Spring Conference on the theme, "Science, Society and Values" to be cosponsored by the World Education Fellowship and the Society for Educational Reconstruction.

The program committee recently met and included the workshop you volunteered to present entitled. "The Care and Feeding of Creativity in Children" in our program.

The Conference is scheduled for April 19th which is a Saturday. Would you please mark your calendar and confirm your participation by sending the bottom part of this letter to me within the next few days. We need the confirmation so that we can begin to print our programs.

We plan to have several workshops offered simultaneously during the morning to be followed by lunch and the luncheon speaker, Dr. James Rutherford.

Each workshop will run for an hour. We expect to have supervisors and teachers of various subject areas present.

The Conference will be held at C.W. Post College. Details (building, room, time, etc.) will be sent to you by Dr. Nasrine Adibe of C.W. Post. Let her know if you need audio visual equipment.

Thank you for your participation.

Sincerely,

Jerry

Jerry B. Davis

Program

A DRIVE-IN CONFERENCE OPPORTUNITY

MANKIND IN A CHANGING ENVIRONMENT

Under the aegis of the
Graduate School of Education
C. W. Post Center

PARTICIPATING GROUPS:
World Education Fellowship
Nassau County Science Supervisors
Society for Educational Reconstruction
National Science Teachers Association

"Science is the twin sister of mankind, and therefore must not be alienated from it."
Pierre Teilhard de Chardin

Rationale

Survival in a world beset by technological and social problems requires creative solutions, consideration and responsible decisions that take into account the reality of global interdependence. It requires the unified efforts of scientists and artists, professionals and practitioners, philosophers and laymen, politicians and scholars. The task for educators is noless than a commitment to the regognition that the fullness of human potential consists of the close interaction between body and mind, emotion and intellect, values and logic, and imagination and reality.

The present isolation of the sciences and the humanities is most unfortunate. Besides creating a false elitism, it has hindered the development of human nature to its full potential by separating the affective processes and the cognitive processes. Findings in the behavorial as well as in the biological sciences point to these processes as interwoven and very much interdependent.

The development of intellectual excellence and sensitivity to values are not incompatible. It requires a synthesis of the humanities and the sciences in resolving today's pertinent issues.

We have learned to reap the benefits of technological progress - we have not learned to adapt to rapid changes in our living style caused by technological progress.

Our survival in a society which is becoming more and more science/technology dominated will depend upon our understanding the structure and method of the scientific process and of the impact of technology on our culture.

The future needs an enlightened citisenry, enlightened in the meanings and processes of science; enlightened in communication skills fundamental to science. In sum, an enlightened citisenry, aware of the forces of human emotion, capable of using its intellectual resources to create a favorable environment that will promote the development of man as a human being with all the dignity

that is the birthright of every being. The task of preparing today's youth for a life of dignity by equipping them with knowledge, skills, attitudes and values they will need to survive in the twenty-first century is, and must be, our concern.

PURPOSE

This conference is designed to bring together educators from the sciences and the humanities for exchanges of ideas on how to educate youth to cope with the realities of today's world. It will re-examine questions raised by science and technological progress, will interpret technical knowledge and explain the processes of science behind such progress.

It is hoped that participants will gain ideas on how to synthesize humanities and sciences in their respective classrooms.

Date:	Saturday April 19, 1975
Time:	9:30 A.M. - 3:30 P.M.
Place:	G.W.Post Center, Long Island University Brookville, N.Y.

Program: Speaker - Dr. James Rutherford
Chairman, Department of Science Education
New York University
President National Science Teachers Assoc.

Workshops will consider topics such as:

Values of leading scientists
Can science educate in values?
Creativity
Examples of interdisciplinary courses actually being offered in some schools.

Ethical considerations of Human Nature
Interpretation of the Ascent of Man.
Energy - Environment

Workshop leaders:

Rick Aaron	Carle Place High School, Carle Place, NY
Nasrine Adibe	Graduate School of Education C.W.Post Center, Brookville, N.Y.
Howard B. Baumel	Staten Island Community College Staten Island, N.Y.
J. Joel Berger	Richmond College, Staten Island, N.Y.
Marc Blosveren	Wilbur Cross S.H., New Haven, Conn.
Reno Calabrese	Salk Junior High School, Levittown, N.Y.
~~Ira Finkel~~	~~Island Trees High School, Levittown, N.Y.~~
Monroe Fremed	Levittown Public Schools, Levittown, N.Y.
Sister Marian Flannery	Dioces of Rockville Centre, Rockville Centre, N.Y.
Lazar Goldberg	Hofstra University, Hempstead, N.Y.
Gertrude Langsam	Adelphi University, Garden City, N.Y.
David Leake	Manhasset High School, Manhasset, N.Y.
Bernard McFadden	Clarke High School, East Meadow, N.Y.
Frank Patti	Chief Nuclear Engineer at Burns & Roe
David Quatlsopand	King Philip School, West Hartford, Conn.

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CONSULTANT
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Bureau of Science Education
State Education Department
Albany, N.Y. 12234

January 23, 1975

Mr. Ira Finkel
Island Trees High School
Levittown, N.Y.

Dear Ira:

This letter is to confirm our earlier conversation regarding your creativity work shop.

The STANYS conference is scheduled for November 2-4. We will schedule the creativity workshop tentatively for Monday, November 3, a.m. (exact time to follow). I would appreciate it if you would write a brief paragraph or two summarizing the scope of the workshop and send it to me. In addition, please list any materials you might need such as overhead projection, screen etc.

Thanks again for accepting our invitation. I will be in touch with you when all conference scheduling has been completed.

Sincerely,

Hal Mahoney

Hal Mahoney
Chairman, Program Committee

Gs

117 Sutton Drive
Plainview, N.Y. 11803
January 30, 1975

Dr. Jack R. Childress
Educational Testing Service
Princeton, N.J.

Dear Dr. Childress:

I am forwarding to you a copy of my Maxi II proposal, addendum and Nova's response along with a description of the program that I have developed and implemented. You may recall my telling you that I received a fully funded $3,000.00 Mini-Project Grant from the N.Y. State Education Department to carry out this project.

This is in response to your desire to look at some of the descriptive material of my work in the area of creativity.

I enjoyed meeting with you and Dr. Hammonds in Albany and having the opportunity to share with you my impressions of and experiences in the Nova program.

Sincerely yours,

Ira Finkel

Ira Finkel

EDUCATIONAL TESTING SERVICE PRINCETON, N. J.

Jack R. Childress
Vice President

2

February 11, 1975

Mr. Ira Finkel
117 Sutton Drive
Plainview, New York 11803

Dear Mr. Finkel:

Thank you very much for your very prompt reply to my request for information about your creativity project. I have not had a chance to review it in its entirety but I am looking forward to it. It came at a very appropriate time since I am meeting with a committee at ETS next week which will be discussing the arts and programs for the preparation of individuals in the various areas associated with this field. I am sure that I will get some clues from your material which will aid in that discussion.

I enjoyed personally our chance to discuss the Nova Program and the student reactions to it. If all graduate students were as convinced that the program that they were following was as beneficial as you people implied that yours has been, the traditional programs would be very elated. Nova certainly has great salesmen in people like yourself.

Good luck to you as you move toward the completion of your degree. I hope that all goes well with the rest of your work and the project.

Very truly yours,

Jack R. Childress

Jack R. Childress
Vice President

JRC:jm

ISLAND TREES HIGH SCHOOL

STRAIGHT LANE
ISLAND TREES 6,
LEVITTOWN, N. Y. 11756
PErshing 1-4020

4 - 4 - 74

Vivienne Anderson, Director
Div. of Humanities and Arts
Room 566 EBA
N.Y. State Educ. Dept.
Albany, New York 12224

Dear Ms. Anderson;
I am planning to design and develop a packaged program (self audio-visual tutorial program with guides) for inservice training of our elementary teachers in creativity. The title of the program is "The Care And Feeding of Creativity in Young Minds- An Inservice Program". It will consist of a series of tapes dealing with the creative process and strategies for developing creative writing, poetry, creative dramatics, art and dance. Lesson outlines will also be included that utilize such techniques as role playing, simulations, brainstorming, and sensory awareness exercises.

I have applied for a SED Miniproject Grant for this summer and plan to implement the program this fall with evaluation carried out via pre and posttest utilizing Torrance Tests on Creativity, and collecting samples of students' works.

Since this project will deal with the humanities, I thought that I would share this with you in the event that it could have some import for use in future conferences, workshops and regional inservice programs in Humanities Education.

Sincerely yours,

Ira Finkel

Ira Finkel
District Director:
Science Education

THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
ALBANY, NEW YORK 12224

SPECIAL NOTICE!

"TOWARD HUMANIZING EDUCATION 4"
CONFERENCE DEADLINE FOR RESERVATIONS:
MARCH 22, 1974

TO: City, Village and District Superintendents; School Board Members; Supervising Principals; Diocesan Superintendents; Elementary and Secondary Public, Private and Parochial School Principals and Teachers; Humanities, Art and Music Educators; Performing Arts Coordinators; Students; Boards of Cooperative Educational Services; Public and Private Institutions of Higher Education

FROM: Vivienne Anderson

SUBJECT: Statewide Conference on the Humanities and the Arts, April 3-5, 1974, Concord Hotel, Kiamesha Lake, New York (see special note on gasoline on page 2)

We look forward to working with your team at this conference which will help you enrich programs for your students.

Many teams of teachers, administrators, students and community members have now registered for the "Toward Humanizing Education 4" Conference. A unique and exciting program has been planned for your teams. The following is a tapestry of just a few of this year's sessions:

Opening Evening Session: Senator William T. Conklin, Deputy Majority Leader of the New York State Senate, will represent the leadership of the New York State Legislature in his brief and interesting keynote, and will receive an award for his dynamic leadership in the arts. Senator Conklin was Chairman of The New York State Commission on Cultural Resources. He is now hard at work promoting the arts as a priority in New York State life and education in the current Legislative session.

Senator Conklin's address will be followed by an exciting live performance of "A Child Goes Forth," a multi-arts celebration of music, theatre and dance inspired by the words of Walt Whitman, presented by the Performing Arts Foundation of Long Island.

Associate Commissioner William L. Bitner will greet the conference at the second evening session on April 4 and present an award from the sixteen cosponsoring statewide associations to Senator Jacob K. Javits for his distinguished national leadership in federal legislation in the arts and humanities. Senator Javits will address the group. This will be followed by a stage performance: an unusual steel band (students)--and a haunting presentation by a Korean, Japanese and Chinese dancer; then a Festival for all participants involving the creation of a multi-media environment in which participants will share experiences in music, dance and theatre.

A Sampling of Exciting Conference Sessions:

The following are just a few examples of the eighty excellent conference sessions from which you will choose:

An Electric Odyssey: Demonstration of dramatic visual and sound imagery for inter-multi-disciplinary programs at all grade levels. You will learn how to make slides without a camera, create film loops, easily constructed motor drive devices and twentieth century shadow puppetry.

Image Making Without a Camera: Demonstration with inexpensive materials, such as found objects and magazine pictures to develop environments, storyboards and other media productions for motivation at all grade levels, kindergarten through college.

The Perriwinklers: A mosaic of poetry on human themes, brought dramatically to life by a renowned group of professional actors. Participants will learn how to develop a climate as well as effective creative writing tools for personal expression.

Community Involvement in the Schools: Workshop participants will plan model programs. (minicourses, independent studies, volunteer work for credit); will use slides and other visual aids designed to show how to use the community as an educational resource.

Humanities/Arts Education for the Future: A demonstration of how humanities/arts education arouses an understanding of one's own creative powers, inspires a search for meaning and value, and makes possible aesthetic experiences.

Editing Super-8mm Film with Synchronized Sound: Participants will be offered activities appropriate for students from intermediate through college age which can be done with a limited budget. They will work in groups as production crews. Each editing crew will be given adequate film footage especially created for this activity. The crews will also receive an editing script. Crews will edit (reorganize, reorder) film footage as well as synchronize a narrative dialogue and musical score with visual images. Some of the film techniques to be explored are: Matched-in-Action, Directoral Cut, Pattern Cutting, and Sound Mixing.

The Steel Band - Here's How: Hands-on experiences in the creation of steel drums and a demonstration of beating, grooving, rough and fine tuning, basic playing techniques, notation and use of other percussion with audience participation. The audience will be involved in the playing of basic type drums as well as various other percussive instruments culminating in a performance by participants of a short repertory of steel band music.

The Artist as Electographer (Creative Video): Presentation of contemporary video tapes produced by outstanding painters, sculptors and video artists. A discussion will focus on the needs to understand the role of electography as a medium of communication between the artist, educator and the public. Ways and means to facilitate the exchange of video tapes will be explored.

Jupiter's Travels on Earth: The Orchestra and Opera Da Camera with the Nicolo Marionettes will present "Jupiter's Travels on Earth," Haydn's Opera for Marionettes. The full performance will be enhanced by discussion and demonstration of this unique medium and its special contribution to a school program, involving administrators, teachers and students from a school which has experienced the presentation and its workshops. A participating workshop in which participants will construct their own marionettes, learn to operate them and give them life in an improvisational setting, supported by musicians, singers and puppeteers, will be held.

Gas for the Trip Home: Because of the energy crisis and gas shortage, the Concord management has arranged for you to purchase an adequate amount of gas per vehicle to travel home upon your departure from the hotel, at the station opposite the main entrance of the hotel. To obtain your allotment, you must present your paid bill or a validated cashiers gas coupon at the station.

Sincerely,

Vivienne Anderson

APPLICATION FOR ATTENDANCE OF TEAMS AT HUMANITIES AND ARTS CONFERENCE, CONCORD HOTEL, APRIL 3-5, 1974. PLEASE RETURN RESERVATION FORMS BY MARCH 22, 1974

INSTRUCTIONS

1. Check or money order for registration fees ($10.00 per person) must accompany this registration form. Student registration fees are $5.00. Registration fees are not refundable after March 25, 1974.
2. If one check is used to pay for more than one individual, kindly type or print the name of each individual covered on the face of the check.
3. One mailing label, containing name, address, city or town, state and zip code should be typed or printed and returned with this form for EACH participant.

The total cost to a district, per person, for conference registration ($10.00) and two nights lodging and food (double occupancy), at $30.80 per diem per person, including all gratuities, is $71.60. Special student rates will be offered which include conference registration ($5.00) and two nights lodging and food (4 students to a room), at $21.80 per diem per student for a total of $48.60.

Checks or money orders should be made out to the National Association for Humanities Education, District 6, and mailed with this application form to: National Association for Humanities Education, District 6, Audrey Trupia, Treasurer, R.D. 3, Edgewood Drive, Averill Park, New York 12018. A mailing label completed as in 3 above should be included for each team member registering to attend the conference.

If you have any special questions, telephone or write:
Vivienne Anderson, Director
Division of the Humanities and the Arts
Room 566 EBA
New York State Education Department
Albany, New York 12224
(518) 474-7810 or 474-7811

Please print or type

Educational Institution ______________________ County ____________
Chief Institution Official ______________________________
Address ______________ City or Town ______________ Zip Code ________
Telephone: Area Code ( ) ____________

MEMBERS OF CONFERENCE TEAM

PLEASE CIRCLE)
Name (Mr., Miss, Mrs., Ms., Dr., Sr.) ______________________________
Title ______________ Subject Area ______________ Grade Level ________
School/Institution ______________________________
Business Address ______________________________
City or Town ______________ State ______________ Zip Code ________
Home Address ______________________________
City or Town ______________ State ______________ Zip Code ________
Business Telephone: Area Code ( ) ________ Home Telephone: Area Code ( ) ________

Please Check One; Conference Participant ☐ ; THE-4 Consultant ☐ ; Student Participant ☐ ; State Education Department ☐ ; Exhibitor ☐

Registration Fee Enclosed: Registration fee ($10.00) ________ Hotel Guest ________
Student fee ($5.00) ________ Commuter ________

THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
ALBANY, NEW YORK 12224

April 12, 1974

Mr. Ira Finkel
District Director of
Science Education
Island Trees High School
Straight Lane
Island Trees 6
Levittown, New York 11756

Dear Mr. Finkel:

Dr. Anderson has forwarded your letter of April 4 to me for reply.

Thank you so very much for sharing with me your immediate plans to proceed with such an interesting project. I sincerely hope you will keep me apprised of your progress. We are always interested in such designs for use at our annual conferences.

Sincerely,

A. Theodore Tellstrom
Chief
Bureau of Music Education

ATT:gg

PORT WASHINGTON PUBLIC SCHOOLS
Hugh E. McGuigan, Superintendent
INSTRUCTIONAL CENTER
16 BELLEVIEW AVENUE
PORT WASHINGTON, NEW YORK 11050

DIRECTOR OF SECONDARY
EDUCATION
TIMOTHY M. MELCHIOR

January 28, 1975

Mr. Ira Finkel
District Director, Science Education
Island Trees High School
Straight Lane
Levittown, New York 11756

Dear Ira:

I received your letter of January 21, Ira, and the description of your presentation is fine with me. May I remind you that the session entitled "Teaching With Creativity" will involve only junior high school and senior high school teachers.

I look forward to meeting you at that time.

Cordially,

Tim Melchior

Timothy M. Melchior

TMM:dk

ISLAND TREES HIGH SCHOOL

STRAIGHT LANE
ISLAND TREES 6,
LEVITTOWN, N. Y. 11756
PErshing 1-4020

1 - 21 - 75

Mr. Tim Melchior
Director : Secondary Educ.
Port Washington Public Schools

Dear Tim;
This is to confirm the Monday, February 10th session on "Teaching For Creativity" at which time I will discuss the creative process, elements of creativity, different types of creativity (general approach), and how to stimulate imagination to elicit creative behavior in Math, Sciences, Language Arts, Social Studies, other cognitive areas and motor areas (specific techniques, strategies and ideas).

I will meet you at 3:15 P.M. in the Main Office of P.D. Schreiber High School on that date.

I am looking forward to meeting with your staff at that time.

Sincerely yours,
Ira Finkel

Ira Finkel
District Director:
Science. Education

Ema Altermann

PORT WASHINGTON PUBLIC SCHOOLS
PORT WASHINGTON, NEW YORK
FEBRUARY 10, 1975

TO: ALL TEACHERS

FROM: Frank T. McGowan, Timothy Melchior, Antoinette Zummo, Cecil Tinier, Joseph Conlon

RE: Curriculum meetings for Februay 10, 1975: 3:15-4:30 p.m.
Schreiber High School

PROGRAM THEME

PROGRAMS OF SPECIAL INTEREST

ALL PROFESSIONAL STAFF MEMBERS ARE TO ATTEND ONE OF THE FOLLOWING CLUSTERS UNLESS THEY ARE TO ATTEND A SPECIAL GROUP MEETING. COFFEE WILL BE SERVED IN THE SCHREIBER CAFETERIA FROM 3:10 p.m. to 3:25 p.m. ALL CLUSTERS AND GROUP MEETINGS WILL BEGIN PROMPTLY AT 3:30 p.m.

CLUSTER I: Teaching for Citizenship in the Age of Watergate (K-12)
Consultant: Prof. Stuart Filler, Associate Dean, Hofstra University Law School
Description: What are the moral implications for American Society in an age of Watergate? What responsibilities does a school system bear? How does a teacher educate for citizenship? How can a teacher provide meaningful instructional experiences for his or her students? These questions will be explored and discussed during this session.
Place: Schreiber auditorium
Presiding: Dr. William Morrison
Recorder: to be determined

CLUSTER II: Communication Skills K-6 - "The Language Arts and the Individual Learner"
Consultant: Dr. Charles Reasoner, Professor of Education, New York University
Description: This will be a discussion-demonstration session. Current thinking in areas of oral and written language, spelling, handwriting and English usage will be presented.
Place: Room 1
Presiding: Mr. Charles Smith
Recorder: Miss Diane Telfeyan

CLUSTER III: Science for Primary Grades (K-3)
Consultant: Dr. Mary Moffat, Professor of Early Childhood Education, Queens College
Description: This cluster will provide basic science curricula and activities for the natural and physical sciences. It will focus on scientific experimentation for the primary grades and will be appropriate for varied levels of teacher sophistication.
Place: Cafeteria
Presiding: Mr. Lee Aschenbrenner
Recorder: Mrs. Pamela Sherry

CLUSTER IV: Individualizing Social Studies (K-6)
Consultant: Mrs. Marie Schilling, Professor of Education, SUNY at Oneonta
Description: This session will focus on individualization in the social studies. Mrs. Schilling will discuss the inquiry method of

CLUSTER XIII: Teaching for Creativity (7-12)

Consultant: Mr. Ira Finkel, District Director of Science Education, Island Trees
Description: This session will focus on the nature of the creative process, elements of creativity, different types of creativity, and the stimulation of creative behavior in the basic cognitive and motor areas.
Place: Room 119
Presiding: Mr. Herman Determan
Recorder: Mr. Stuart Thomas

CLUSTER XIV: Helping the Learning Disabled Adolescent in the Regular Classroom (7-9)

Consultant: Dr. Ernest Siegel, Associate Professor in Special Education, Adelphi University
Description: This session is designed to provide an opportunity for the junior high school teachers with a specific session on learning disabilities in the early adolescent. Specific attention will be directed to means for remediating and individualizing instruction and improving student self-concept.
Place: Room 140
Presiding: Mr. Leo Donahue
Recorder: Mrs. Zelda Ferber

CLUSTER XV: Geometry Labs (7-12)

Consultant: Mrs. Elaine Labrocca, Schreiber
Description: This session is designed to acquaint the secondary math teachers with the lab approach that is used in geometry at Schreiber. A discussion of the math lab and its potential is also planned.
Place: Room 6
Presiding: Mr. Robert Bartels
Recorder: Mr. Frank Meystrik

CLUSTER XVI: Teaching About Cardiac Resuscitation

Consultant: Dr. Joseph Tesoriero
Description: Dr. Tesoriero will meet with the secondary health teachers to discuss the topic of teaching cardiac resuscitation.
Place: Room 129
Presiding: Mr. William Berry
Recorder: Mr. Preston Johnson

CLUSTER XVII: Current Health Services Program

Consultant: Dr. Joan Easton, Port Washington Public Schools Physician
Description: The purpose of this session is to review certain practices in our current health services program.
Place: Room 112
Presiding: Mrs. Sylvia Chollet
Recorder: Mrs. Helen Reid

THE FOLLOWING MEETINGS HAVE BEEN ORGANIZED TO MEET SPECIFIC DEPARTMENTAL AND/OR PROGRAM NEEDS:

1. The Schreiber business education department will meet in the Schreiber business education office to discuss the ten week elective program and new courses for the third marking period and to plan the fourth quarter business education program.

2. The Schreiber science department will meet in the science wing to discuss the organization of the science program and its role in the Schreiber High School program.

PORT WASHINGTON PUBLIC SCHOOLS
Hugh E. McGuigan, Superintendent
INSTRUCTIONAL CENTER
16 BELLEVIEW AVENUE
PORT WASHINGTON, NEW YORK 11050

DIRECTOR OF SECONDARY
EDUCATION
TIMOTHY M. MELCHIOR

February 11, 1975

Mr. Ira Finkel
District Director, Science Education
Island Trees High School
Straight Lane
Levittown, New York 11756

Dear Ira:

Thank you, Ira, for joining us on our Curriculum Monday, February 10, to discuss creativity and creative behavior. Your presentation was well received, and the teachers felt that your information provided new insights into ways to stimulate creative thinking on the part of both teachers and students. Thank you for your help.

Cordially,

Tim Melchior

Timothy M. Melchior

TMM:dk

Brighton Public Schools
SCHOOL DISTRICT 27J
BRIGHTON, COLORADO
80601

DANIEL L. WHITACRE
DEPUTY SUPERINTENDENT

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WILLIAM F. SHARP, JR.

December 23, 1971

Ira Finkel, Project Director
Island Trees High School
Straight Lane
Leveittown, N.Y. 11756

Dear Project Director:

We are most interested in your E.S.E.A. Title III project:

The Care and Feeding of Creativity in Children -- An Inservice Program for Educators

We are involved in program development in a similar area and your project may provide assistance.

Would you please send us one copy of any dissemination material you have developed and one copy of your most recent continuation and/or evaluation document. Do you have other program materials available as a result of this project? What are your procedures for possible visitation?

Thank you for your assistance.

Sincerely,

Daniel L. Whitacre

Daniel L. Whitacre
Deputy Superintendent

DLW:cv

APPENDIX

SECTION X Letters From Observers of Maxi II Practicum

March 3, 1975

Dr. S. O. Kaylin
Director of Practicums and Case Development
Nova University Ed.D. Program
College Avenue
Fort Lauderdale, Florida 33314

COPY

Dear Dr. Kaylin:

Mr. Ira Finkel, Director of Science in this school district, has recently completed a comprehensive inservice program for teachers on developing imagination and creativity in children. The course includes films, slides, videotapes and audiotapes, and was taught to five teachers by Mr. Finkel during this school year. All the feedback we have received is excellent, both from teachers and students, and we have every intention of incorporating the course and the ideas it presents into our program during the next few years. The specific suggestions Mr. Finkel has developed are practical and workable, and have excellent effect in the classroom.

Sincerely,

Richard G. Morrow
Superintendent

RGM:ms

c.c. I. Finkel

ISLAND TREES PUBLIC SCHOOLS
Union Free School District #26
ISLAND TREES, LEVITTOWN, N. Y. 11756
PErshing 1-4020

OFFICE OF THE PRINCIPAL

J. FRED SPARKE SCHOOL
Robin Place

March 3, 1975

Dr. S. O. Kaylin
Director of Practicums & Case Development
Nova University
College Avenue
Fort Lauderdale, Florida 33314

Dear Dr. Kaylin:

We have just completed using a series of activity lessons, DEVELOPING IMAGINATION, and CREATIVITY, designed by Mr. Ira Finkel for use in intermediate level classrooms. The purpose of the series is to foster, develop, and draw forth the creativity of the youngsters through such activities as are involved in music, art, role playing, and the like. These materials were used successfully in our sixth grade.

Through my examination of the materials, I am convinced of their potential for productive classroom use. The success of the program this year indicates to me the value of its possible implementation in our school next year, and I hope to be able to do this during the 75/76 school year.

Very truly yours,

Mary Ann Kivlighn

Mary Ann Kivlighn
Principal

MAK:EMcD
cc: Mr. Ira Finkel

ISLAND TREES PUBLIC SCHOOLS
Union Free School District #26
ISLAND TREES, LEVITTOWN, N. Y.
Area Code 516 — PErshing 1-4020

STEPHEN E. KAROPCZYC SCHOOL
Island Trees 1
Levittown, N. Y. 11756

March 6, 1975

Dr. S.O. Kaylin
Director of Practicums and Case Development
Nova University Ed. D. Program
College Ave.
Fort Lauderdale, Florida 33314

Dear Dr. Kaylin:

We are currently using the entire program "Developing Imagination and Creativity" developed by Mr. Ira Finkel.

The pupils and teachers have enjoyed using the program, and we have noticed marked improvement in pupils' attitudes and understandings.

We recommend that the program be continued next year.

Very truly yours,

Annette Stokes

AS:ht (Mrs.) Annette Stokes, Principal

March 3, 1975

Dr. S. O. Kaylin
Director of Practicums and Case Development
Ed. D. Program
Nova University
College Avenue
Fort Lauderdale, Florida 33314

Dear Dr. Kaylin:

Mr. Ira Finkel has kept me apprised of the work in which he is engaged since the inception of his doctoral project. On several occasions he, some colleagues of mine, and I discussed his work. In the process, I have had the opportunity to examine the various materials he has developed.

I am very favorably impressed with the quality of the work that Mr. Finkel has done. In fact, as President of the Nassau County Science Supervisors Association, I invited Mr. Finkel to be the guest speaker at our November, 1974 general membership meeting. He spoke about the work in which he is involved. I know that as a result of his fine presentation he was invited by the Director of Secondary Education of the Port Washington school district to offer a workshop on creativity in that district. In addition, I invited Mr. Finkel to present another workshop at a Spring, 1975 conference to be jointly sponsored by the Nassau County Science Supervisors Association and two other professional organizations with support by a grant from the National Science Teachers Association.

In addition to doing a fine job, I believe that Mr. Finkel has involved himself in an area that is in need of greater professional attention than is ordinarily given to it. Teachers and those who are preparing to teach need to learn ways to nurture creativity in children. I believe that Mr. Finkel's work can and deserves to be implemented in school district in-service courses as well as University in-service workshops. In addition, I believe that his work or segments of it, if incorporated into existing undergraduate teacher education programs, would serve a very worthwhile purpose.

The materials and activities that Mr. Finkel has developed are at the elementary school level. I have no doubt that I would have included segments of his work in my courses were they at the secondary school level. There is a need for such work at that level too.

In conclusion, I believe Mr. Finkel has done an excellent job and his work has much potential for use in programs designed to educate teachers.

Sincerely yours,

Jerry B. Davis

JBD/lp

Jerry B. Davis
Associate Professor of
Secondary Education

ISLAND TREES HIGH SCHOOL

STRAIGHT LANE
ISLAND TREES 6,
LEVITTOWN, N. Y. 11756
PErshing 1-4020

March 11, 1975

Dr. S. O. Kaylin
Director of Practicums and Case Development
Nova University Ed. D. Program
College Avenue
Fort Lauderdale, Florida 33314

Dear Dr. Kaylin:

Mr. Ira Finkel has recently completed a successful pilot project for elementary school children in Island Trees. The project was entitled "Developing Imagination and Creativity in Children".

I am thoroughly familiar with the materials and the manner in which the project was carried out because I have discussed it with Mr. Finkel on numerous occasions and have indicated that elements of it have immediate practical application in our high school.

Plans are now being made to further develop the program so that it could be implemented next school year with regular courses of study in the high school.

In carrying out this important work, Mr. Finkel has proved that he is an innovator with a high commitment of purpose, and an ability to inspire great effort in others.

Through his skill in implementing this project, he has demonstrated exceptional leadership for the staff and has provided a needed and valuable educational service for the school district.

Very truly yours,

Irving Carroll

Irving Carroll
Principal

IC:el